CDX-F5000/FW500

SERVICE MANUAL

Ver 1.1 2004. 05

US Model
CDX-F5000/FW500
Canadian Model
CDX-F5000

• The tuner and CD sections have no adjustments.

Model Name Using Similar Mechanism	CDX-R3000/RW300
CD Drive Mechanism Type	MG-611XA-186//K
Optical Pick-up Name	KSS1000E

AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION
23.2 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 5% total harmonic distortion.

SPECIFICATIONS

CD player section

Signal-to-noise ratio	120 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	67 dB (stereo), 69 dB (mono)
Harmonic distortion at 1 kHz	0.5% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	52 W × 4 (at 4 ohms)

General

Outputs	Audio outputs terminal (rear/sub switchable) Power antenna relay control terminal Power amplifier control terminal
Inputs	Telephone ATT control terminal Remote controller input terminal BUS control input terminal BUS audio input terminal Antenna input terminal
Tone controls	Low: ±10 dB at 60 Hz (XPLOD) Mid: ±10 dB at 1 kHz (XPLOD) High: ±10 dB at 10 kHz (XPLOD)
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 177 mm (7 1/8 × 2 × 7 in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 mm (7 1/4 × 2 1/8 × 6 3/8 in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb. 10 oz.)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1) Card remote commander RM-X115

Design and specifications are subject to change without notice.

FM/AM COMPACT DISC PLAYER

9-961-429-02
2004E04-1
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Sony Corporation
e Vehicle Company
Published by Sony Engineering Corporation

SONY®

SERVICE NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

TEST DISCS

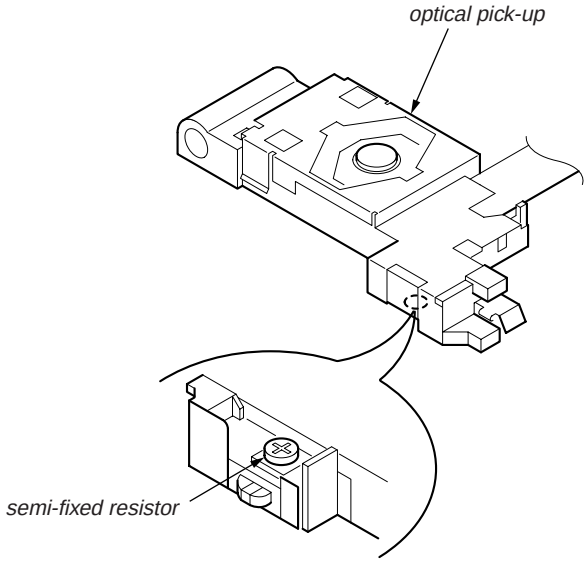
This set can playback CD-R and CD-ROM discs. The following test discs should be used to check the capability:

CD-R test disc TCD-R082LMT (Part No. J-2502-063-1)
CD-RW test disc TCD-W082L (Part No. J-2502-063-2)

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

If the optical pick-up block is defective, please replace the whole optical pick-up block.
Never turn the semi-fixed resistor located at the side of optical pick-up block.



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Notes on CD-Rs (recordable CDs)/CD-RWs (rewritable CDs)

This unit can play the following discs:

Type of discs	Label on the disc
Audio CD	COMPACT disc DIGITAL AUDIO Recordable COMPACT disc DIGITAL AUDIO ReWritable
MP3 files	COMPACT disc DIGITAL AUDIO Recordable COMPACT disc DIGITAL AUDIO ReWritable COMPACT disc Recordable COMPACT disc ReWritable

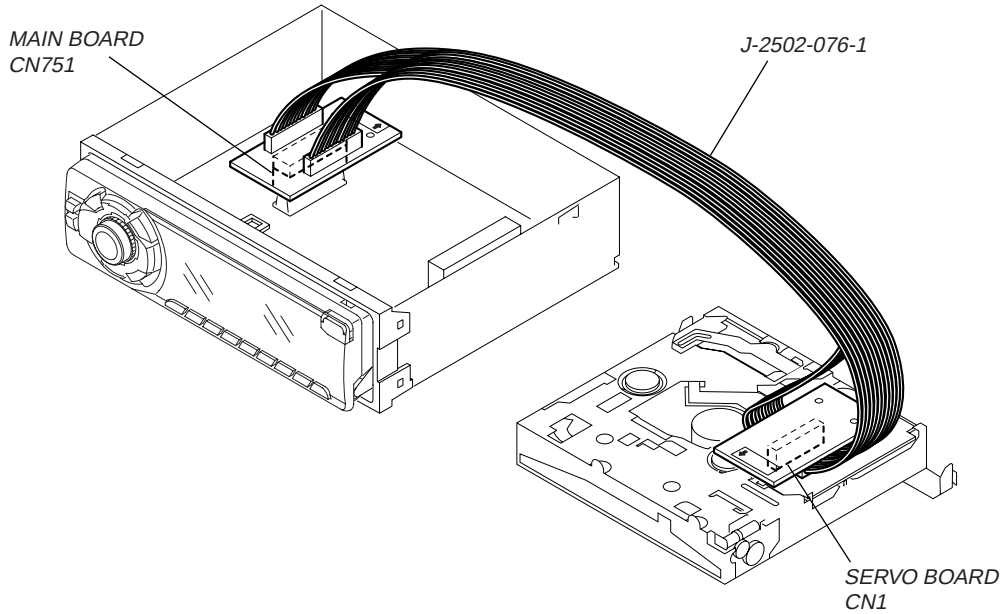
- Some CD-Rs/CD-RWs (depending on the equipment used for its recording or the condition of the disc) may not play on this unit.
- You cannot play a CD-R/CD-RW that is not finalized*.
- You can play MP3 files recorded on CD-ROMs, CD-Rs, and CD-RWs.
- A CD-R/CD-RW to which a session can be added can be played.

* A process necessary for a recorded CD-R/CD-RW disc to be played on the audio CD player.

EXTENSION CABLE AND SERVICE POSITION

When repairing or servicing this set, connect the jig (extension cable) as shown below.

- Connect the MAIN board (CN751) and the SERVO board (CN1) with the extension cable (Part No. J-2502-076-1).



● UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

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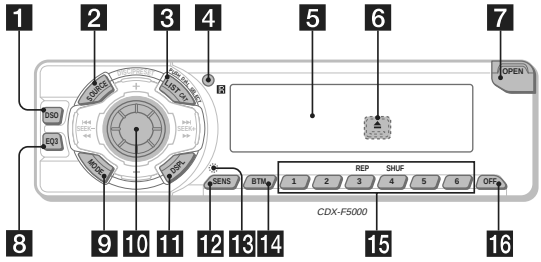
SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls (CDX-F5000)

Refer to the pages listed for details.

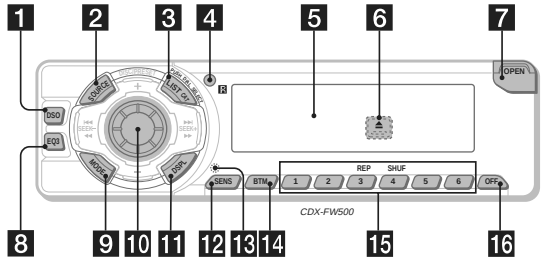


1 **DSO button** *20*
2 **SOURCE (Power on/Radio/CD/MD) button**
To select the source.
3 **LIST/CAT*1 button** *12, 13, 15*
4 **Receptor for the card remote commander**
5 **Display window**
6 **⏏ (eject) button** (located on the front side of the unit, behind the front panel) *10*
7 **OPEN button** *8, 10*
8 **EQ3 button** *19*
9 **MODE button**
To change operation.
10 **Volume control dial/Select button**
Rotate to:
– Adjust the volume.
– Adjust settings.
Press to:
– Select items.
11 **DSPL (display mode change) button** *9, 11, 13, 18*
12 **SENS button** *14, 15*
13 **RESET button** (located on the front side of the unit, behind the front panel) *8*
14 **BTM button**
15 **Number buttons** *18*
Radio:
To store stations/receive stored stations.
CD/MD:
③: **REP** *11*
④: **SHUF** *12*
16 **OFF (Stop/Power off) button***2 *8, 10*

*1 (CAT) is available only when the XM tuner is connected.
*2 **Warning when installing in a car without an ACC (accessory) position on the ignition switch**
After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.

Location of controls (CDX-FW500)

Refer to the pages listed for details.



1 **DSO button** *20*
2 **SOURCE (Power on/Radio/CD/MD) button**
To select the source.
3 **LIST/CAT*1 button** *12, 13, 15*
4 **Receptor for the card remote commander**
5 **Display window**
6 **⏏ (eject) button** (located on the front side of the unit, behind the front panel) *10*
7 **OPEN button** *8, 10*
8 **EQ3 button** *19*
9 **MODE button**
To change operation.
10 **Volume control dial/Select button**
Rotate to:
– Adjust the volume.
– Adjust settings.
Press to:
– Select items.
11 **DSPL (display mode change) button** *9, 11, 13, 18*
12 **SENS button** *14, 15*
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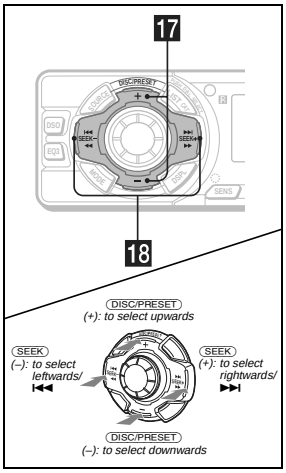
Radio:
To store stations/receive stored stations.
CD/MD:
③: **REP** *11*
④: **SHUF** *12*
16 **OFF (Stop/Power off) button***2 *8, 10*

*1 (CAT) is available only when the XM tuner is connected.
*2 **Warning when installing in a car without an ACC (accessory) position on the ignition switch**
After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.

4

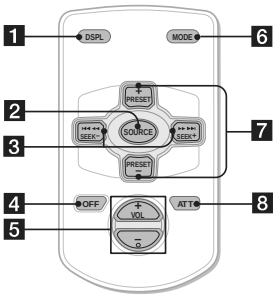
4



17 **DISC (ALBUM)/PRESET buttons (+/–)**
To receive preset stations/change the disc*1, skip albums*2.
*1 When an optional CD/MD unit is connected.
*2 Available only when an optional CD unit with the MP3 file control function is connected, and MP3 file is played.

18 **SEEK buttons (–/+)**
To skip tracks/fast-forward, reverse a track/tune in stations automatically, find a station manually/select a setting.

Card remote commander RM-X115



The corresponding buttons of the card remote commander control the same functions as those on this unit.

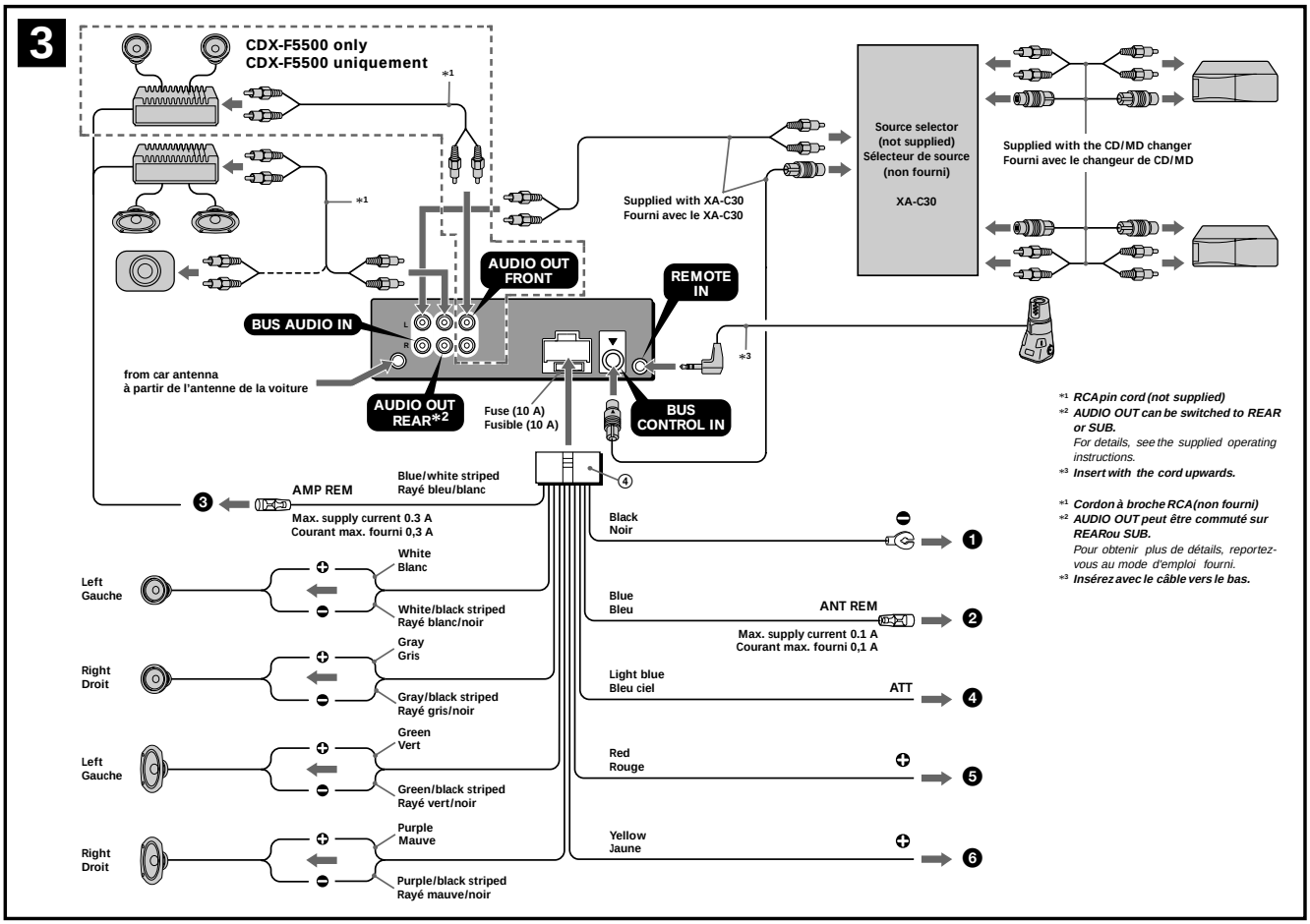
1 **DSPL button**
2 **SOURCE button**
3 **SEEK (–/+) buttons**
4 **OFF button**
5 **VOL (+/–) buttons**
6 **MODE button**
7 **PRESET (DISC/ALBUM) (+/–) buttons**
8 **ATT button**

Note
If the display disappears by pressing (OFF), it cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a disc is inserted to activate the unit first.

Tip
For details on how to replace the battery, see "Replacing the lithium battery" on page 21.

continue to next page →

Connections (CDX-F5000)



*1 *RCA pin cord (not supplied)*
*2 *AUDIO OUT can be switched to REAR or SUB.*
For details, see the supplied operating instructions.
*3 *Insert with the cord upwards.*

*1 *Cordon à broche RCA (non fourni)*
*2 *AUDIO OUT peut être commuté sur REAR ou SUB.*
Pour obtenir plus de détails, reportez-vous au mode d'emploi fourni.
*3 *Insérez avec le câble vers le bas.*

Connection diagram (3)

❶ **To a metal surface of the car**
First connect the black ground lead, then connect the yellow and red power input leads.

❷ **To the power antenna control lead or power supply lead of antenna booster amplifier**

Notes
- *It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.*
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❸ **To AMP REMOTE IN of an optional power amplifier**
This connection is only for amplifiers. Connecting any other system may damage the unit.

❹ **To the interface cable of a car telephone**

❺ **To the +12 V power terminal which is energized in the accessory position of the ignition key switch**

Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.*
  Be sure to connect the black ground lead to a metal surface of the car first.
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❻ **To the +12 V power terminal which is energized at all times**
Be sure to connect the black ground lead to a metal surface of the car first.

Notes on the control and power supply leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM antenna in the rear/side glass, connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.*
- *A power antenna without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker leads to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Schéma de raccordement (3)

❶ **À un point métallique de la voiture**
Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.

❷ **Vers le fil de commande de l'antenne électrique ou le fil d'alimentation de l'amplificateur d'antenne**

Remarques
- *Il n'est pas nécessaire de raccorder ce fil s'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, ou avec une antenne télescopique manuelle.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir « Remarques sur les fils de commande et d'alimentation ».*

❸ **Au niveau du AMP REMOTE IN de l'amplificateur de puissance en option**
Ce raccordement s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.

❹ **Vers le cordon de liaison d'un téléphone de voiture**

❺ **À la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires**

Remarques
- *S'il n'y a pas de position accessoires, raccordez la borne d'alimentation (batterie) +12 V qui est alimentée en permanence.*
  Raccordez d'abord le fil de masse noir à un point métallique du véhicule.
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir « Remarques sur les fils de commande et d'alimentation ».*

❻ **À la borne +12 V qui est alimentée en permanence**
Raccordez d'abord le fil de masse noir à un point métallique du véhicule.

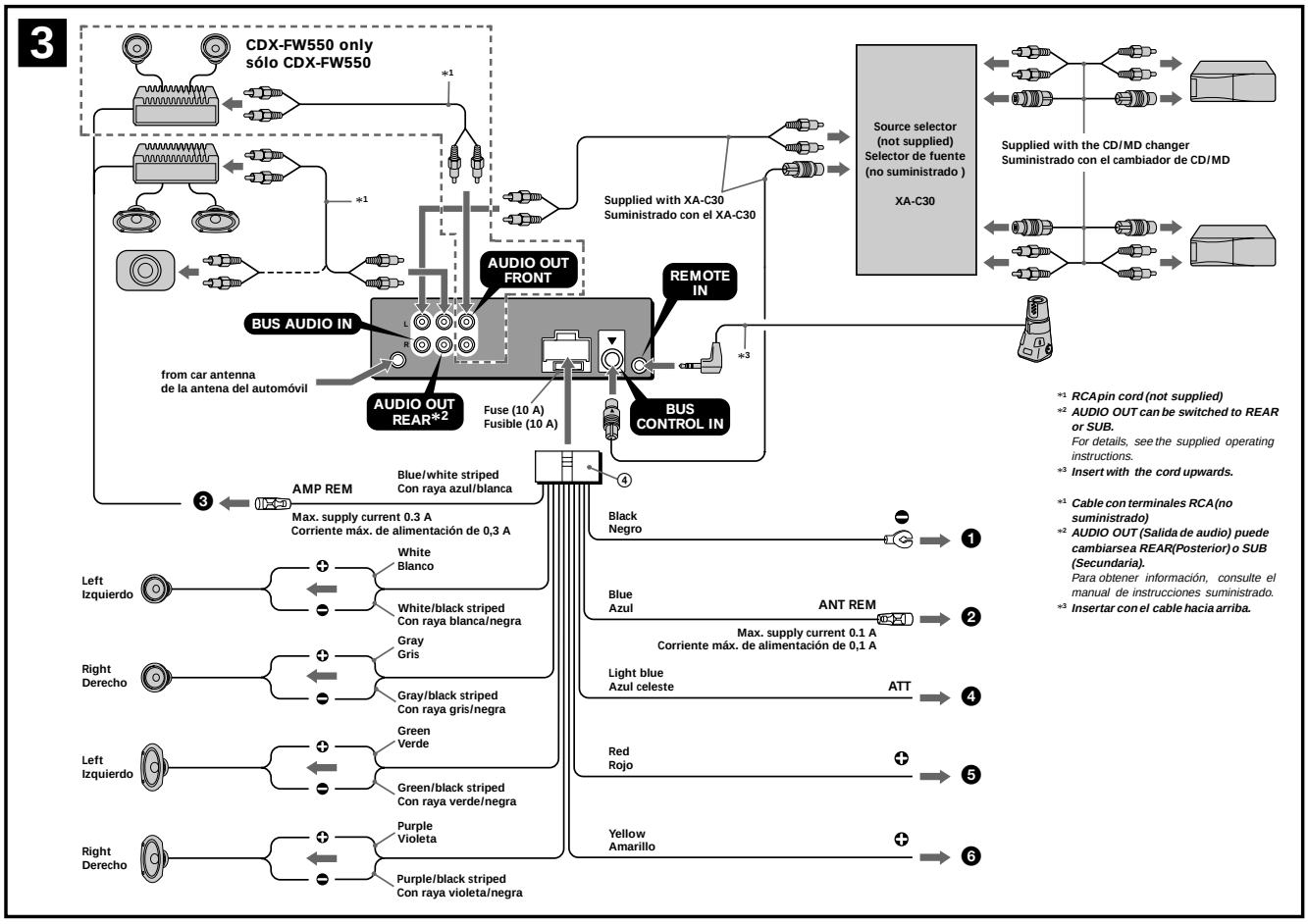
Remarques sur les fils de commande et d'alimentation
- *Le fil de commande de l'antenne électrique (bleu) fournit une alimentation de +12 V CC lorsque vous mettez la radio sous tension.*
- *Lorsque votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, raccordez le fil de commande de l'antenne (bleu) ou l'entrée d'alimentation des accessoires (rouge) à la borne d'alimentation de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre détaillant.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Raccordement pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur le raccordement des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettez l'appareil hors tension.*
- *Utilisez des haut-parleurs ayant une impédance de 4 à 8 ohms avec une capacité électrique adéquate pour éviter de les endommager.*
- *Ne raccordez pas les bornes du système de haut-parleurs au châssis de la voiture et ne raccordez pas les bornes des haut-parleurs droit à celles du haut-parleur gauche.*
- *Ne raccordez pas le câble de masse de cet appareil à la borne négative (–) de l'enceinte.*
- *N'essayez pas de raccorder les haut-parleurs en parallèle.*
- *Raccordez uniquement des haut-parleurs passifs. Le raccordement de haut-parleurs actifs (avec amplificateurs intégrés) aux bornes des haut-parleurs peut endommager l'appareil.*
- *Pour éviter tout dysfonctionnement, n'utilisez pas les fils des haut-parleurs intégrés installés dans votre voiture si l'appareil partage un fil négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les cordons des haut-parleurs de l'appareil.*

Remarque sur le raccordement
Si les haut-parleurs et l'amplificateur ne sont pas raccordés correctement, le message « FAILURE » s'affiche. Dans ce cas, assurez-vous que les haut-parleurs et l'amplificateur sont bien raccordés.

Connections (CDX-FW500)



*1 *RCA pin cord (not supplied)*
*2 *AUDIO OUT can be switched to REAR or SUB.*
For details, see the supplied operating instructions.
*3 *Insert with the cord upwards.*

*1 *Cable con terminales RCA (no suministrado)*
*2 *AUDIO OUT (Salida de audio) puede cambiarsea REAR(Posterior) o SUB (Secundaria).*
Para obtener información, consulte el manual de instrucciones suministrado.
*3 *Insertar con el cable hacia arriba.*

Connection diagram (3)

❶ **To a metal surface of the car**
First connect the black ground lead, then connect the yellow and red power input leads.

❷ **To the power antenna control lead or power supply lead of antenna booster amplifier**

Notes
- *It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.*
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❸ **To AMP REMOTE IN of an optional power amplifier**
This connection is only for amplifiers. Connecting any other system may damage the unit.

❹ **To the interface cable of a car telephone**

❺ **To the +12 V power terminal which is energized in the accessory position of the ignition key switch**

Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.*
  Be sure to connect the black ground lead to a metal surface of the car first.
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❻ **To the +12 V power terminal which is energized at all times**
Be sure to connect the black ground lead to a metal surface of the car first.

Notes on the control and power supply leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM antenna in the rear/side glass, connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.*
- *A power antenna without a relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker leads installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker leads to each other.*

Note on connection
If speaker and amplifier are not connected correctly, "FAILURE" appears in the display. In this case, make sure the speaker and amplifier are connected correctly.

Diagrama de conexión (3)

❶ **A una superficie metálica del automóvil**
Conecte primero el cable de toma a tierra negro, y después los cables amarillo y rojo de entrada de alimentación.

❷ **Al cable de control de la antena motorizada o al cable de fuente de alimentación del amplificador de antena**

Notas
- *Si no se dispone de antena motorizada ni de amplificador de antena, o se utiliza una antena telescópica accionada manualmente, no será necesario conectar este cable.*
- *Si el automóvil incorpora una antena de FM/AM en el cristal trasero o lateral, consulte "Notas sobre los cables de control y de fuente de alimentación"*

❸ **Para conectar a AMP REMOTE IN del amplificador de potencia opcional**
Esta conexión es sólo para amplificadores. La conexión de cualquier otro sistema puede dañar la unidad.

❹ **Al cable de interfaz de un teléfono para automóvil**

❺ **Al terminal de alimentación de +12 V que recibe energía en la posición de accesorio del interruptor de la llave de encendido**

Notas
- *Si no hay posición de accesorio, conéctelo al terminal de alimentación (batería) de +12 V que recibe energía sin interrupción.*
  Asegúrese de conectar primero el cable de toma a tierra negro a una superficie metálica del automóvil.
- *Si el automóvil incorpora una antena de FM/AM en el cristal trasero o lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".*

❻ **Al terminal de alimentación de +12 V que recibe energía sin interrupción**
Asegúrese de conectar primero el cable de toma a tierra negro a una superficie metálica del automóvil.

Notas sobre los cables de control y de fuente de alimentación
- *El cable de control de la antena motorizada (azul) suministrará cc de +12V cuando conecte la alimentación del sintonizador.*
- *Si el automóvil dispone de una antena de FM/AM incorporada en el cristal trasero o lateral, conecte el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener más información, consulte a su proveedor.*
- *Con esta unidad no es posible utilizar una antena motorizada sin caja de relé.*

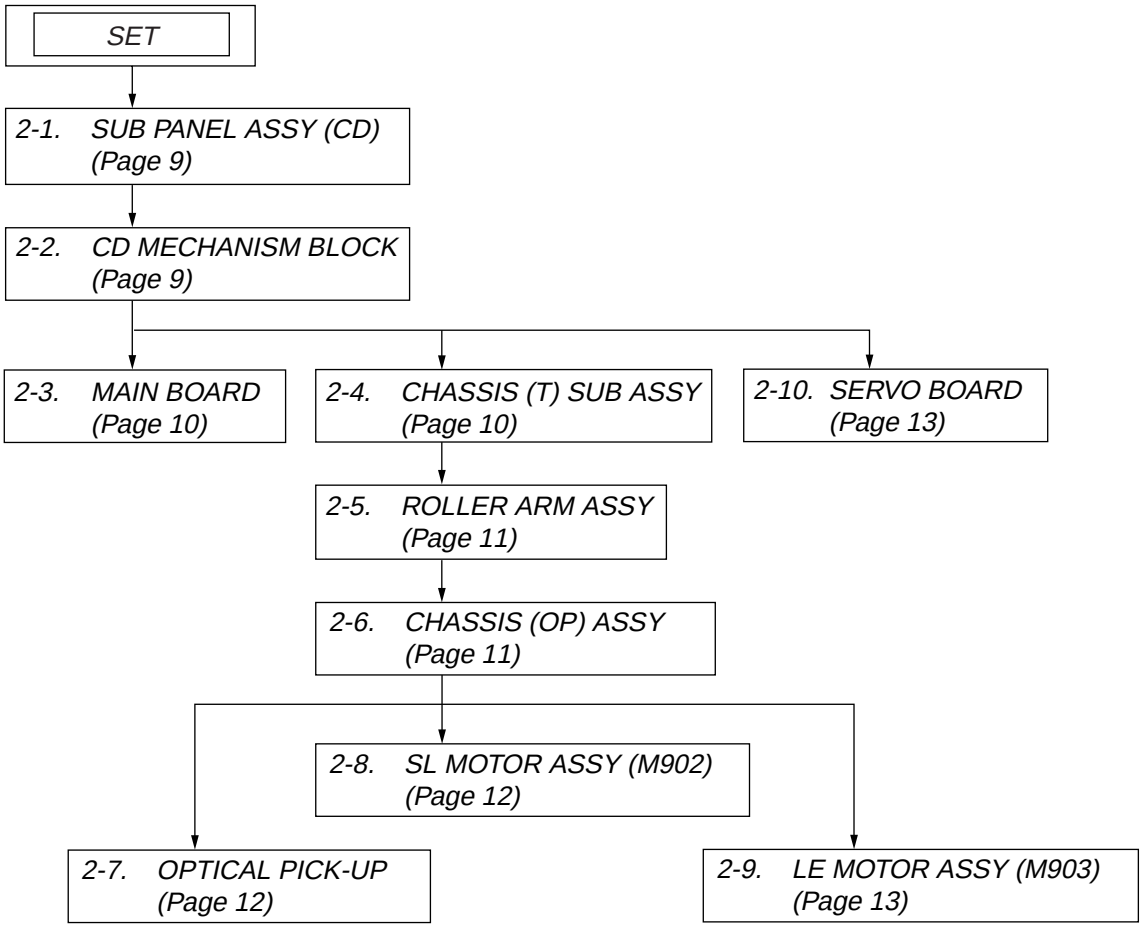
Conexión para protección de la memoria
Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, aunque apague la llave de encendido.

Notas sobre la conexión de los altavoces
- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 Ω con la capacidad de potencia adecuada para evitar que se dañen.*
- *No conecte los terminales de altavoz al chasis del automóvil, ni conecte los terminales del altavoz derecho con los del izquierdo.*
- *No conecte el cable de toma a tierra de esta unidad al terminal negativo (–) del altavoz.*
- *No intente conectar los altavoces en paralelo.*
- *Conecte solamente altavoces pasivos. Si conecta altavoces activos (con amplificadores incorporados) a los terminales de altavoz, puede dañar la unidad.*
- *Para evitar fallos de funcionamiento, no utilice los cables de altavoz incorporados instalados en el automóvil si su unidad comparte un cable negativo común (–) para los altavoces derecho e izquierdo.*
- *No conecte los cables de altavoz de la unidad entre sí.*

Nota sobre la conexión
Si el altavoz y el amplificador no están conectados correctamente, aparecerá "FAILURE" en la pantalla. Si es así, compruebe la conexión de ambos dispositivos.

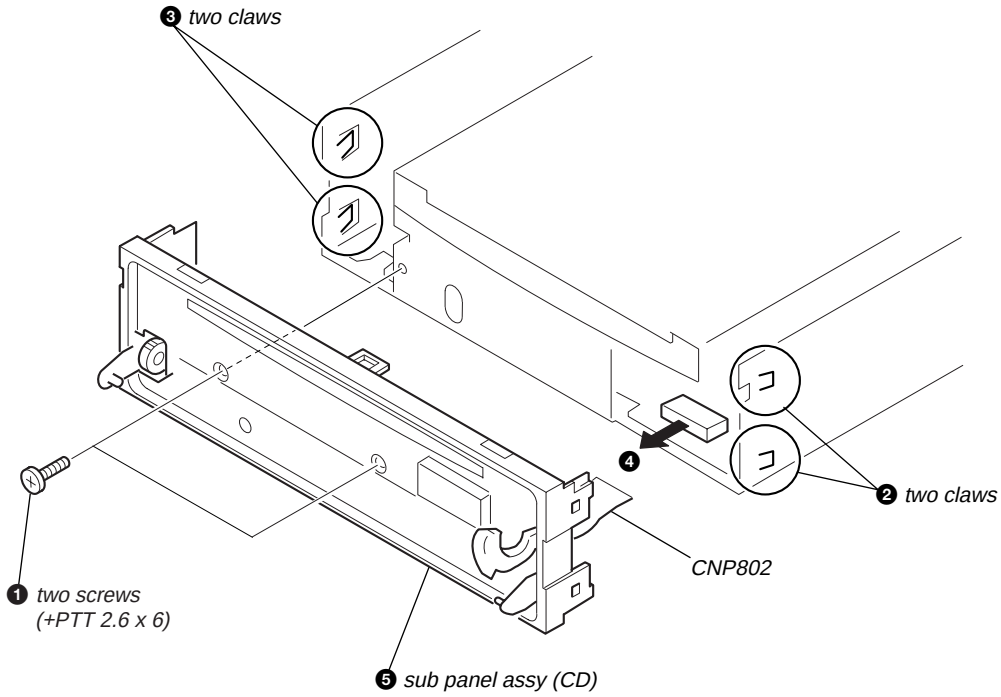
SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

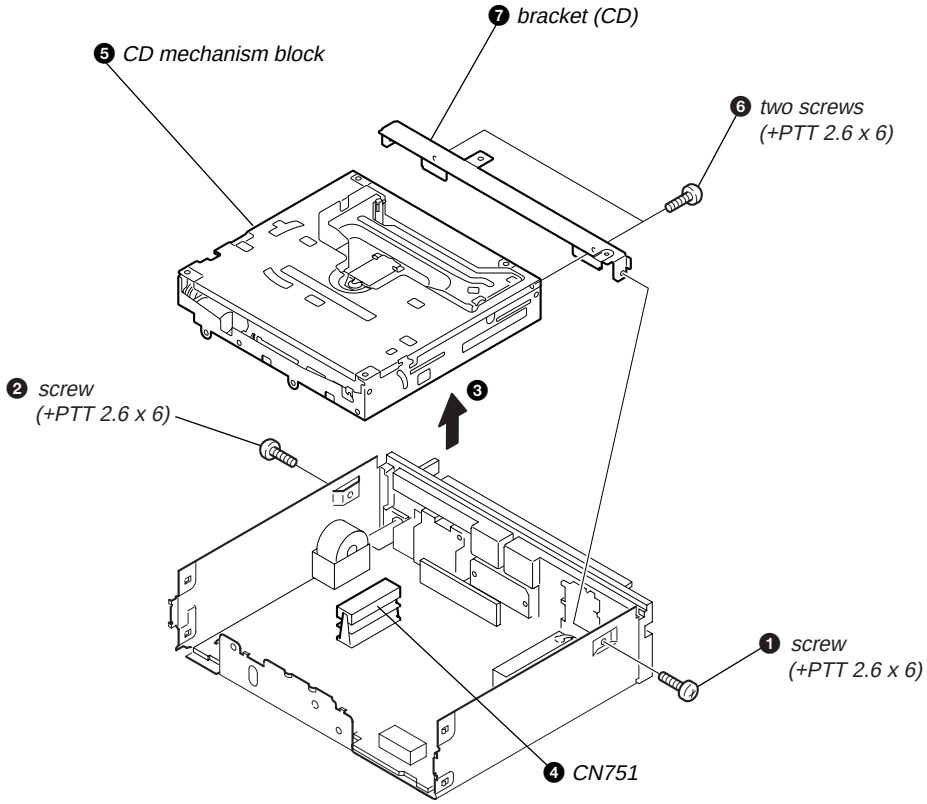

SET
2-1. SUB PANEL ASSY (CD) (Page 9)
2-2. CD MECHANISM BLOCK (Page 9)
2-3. MAIN BOARD (Page 10)
2-4. CHASSIS (T) SUB ASSY (Page 10)
2-10. SERVO BOARD (Page 13)
2-5. ROLLER ARM ASSY (Page 11)
2-6. CHASSIS (OP) ASSY (Page 11)
2-8. SL MOTOR ASSY (M902) (Page 12)
2-7. OPTICAL PICK-UP (Page 12)
2-9. LE MOTOR ASSY (M903) (Page 13)

Note : Follow the disassembly procedure in the numerical order given.

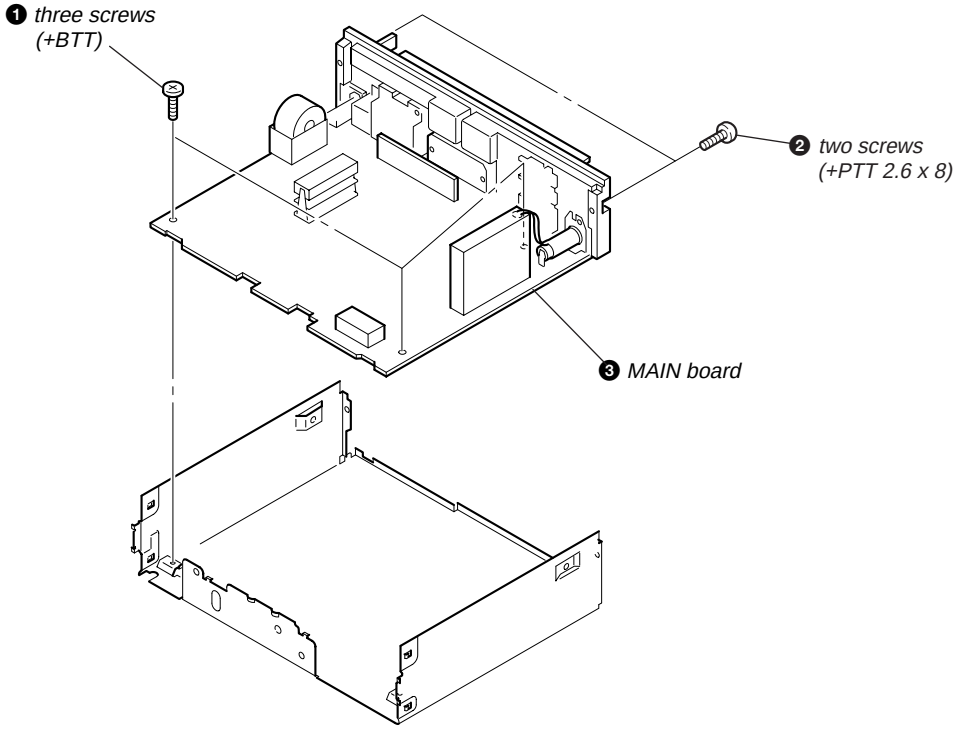
2-1. SUB PANEL ASSY (CD)



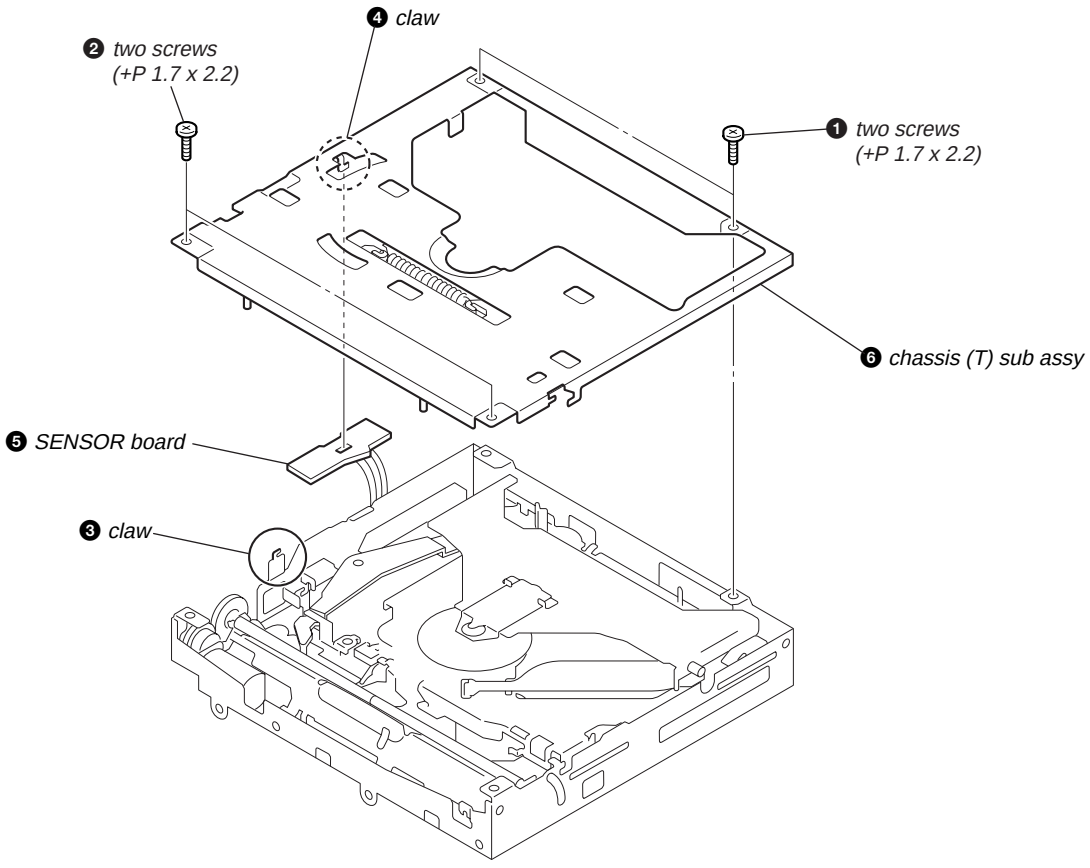
2-2. CD MECHANISM BLOCK



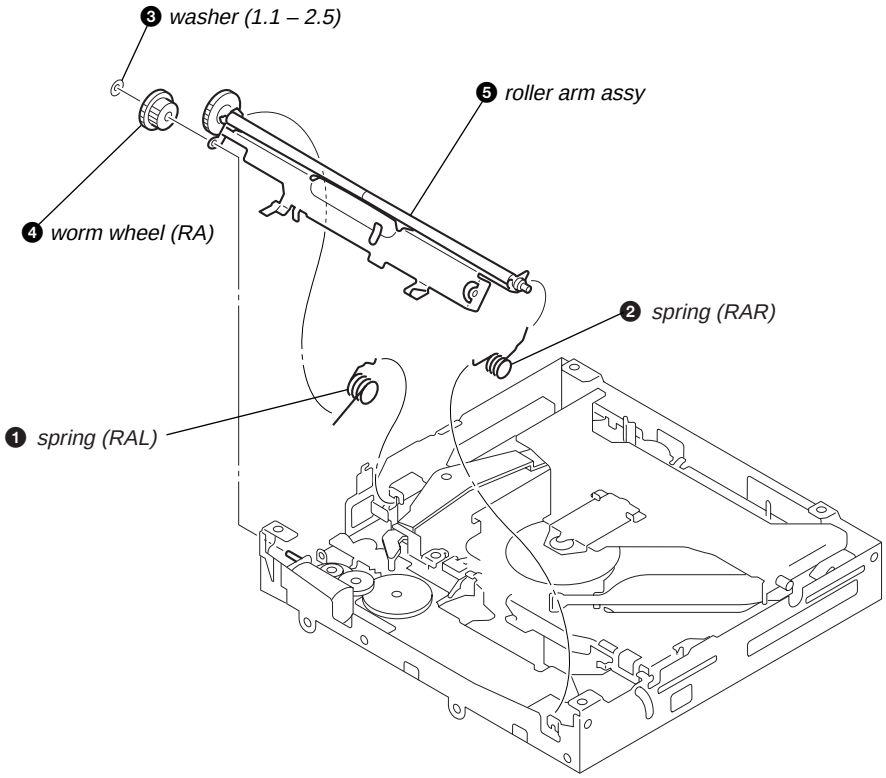
2-3. MAIN BOARD



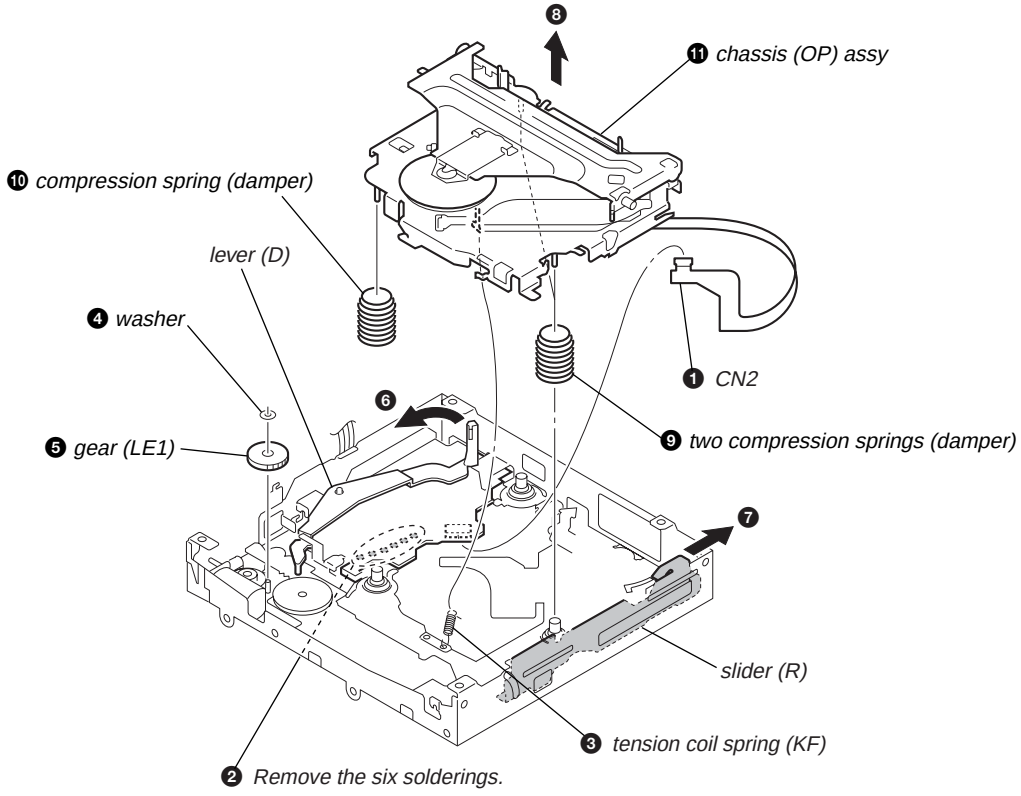
2-4. CHASSIS (T) SUB ASSY



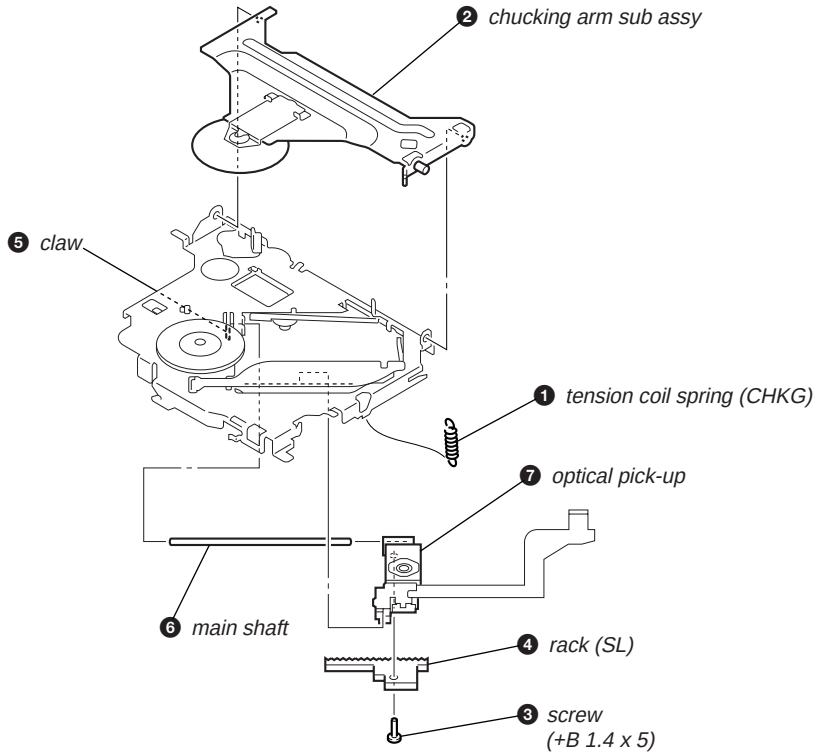
2-5. ROLLER ARM ASSY



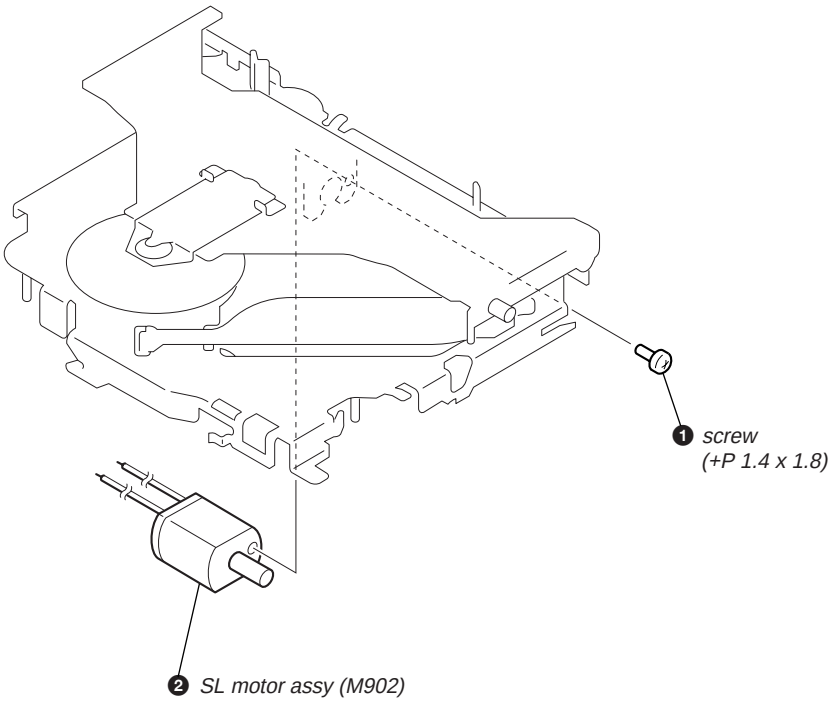
2-6. CHASSIS (OP) ASSY



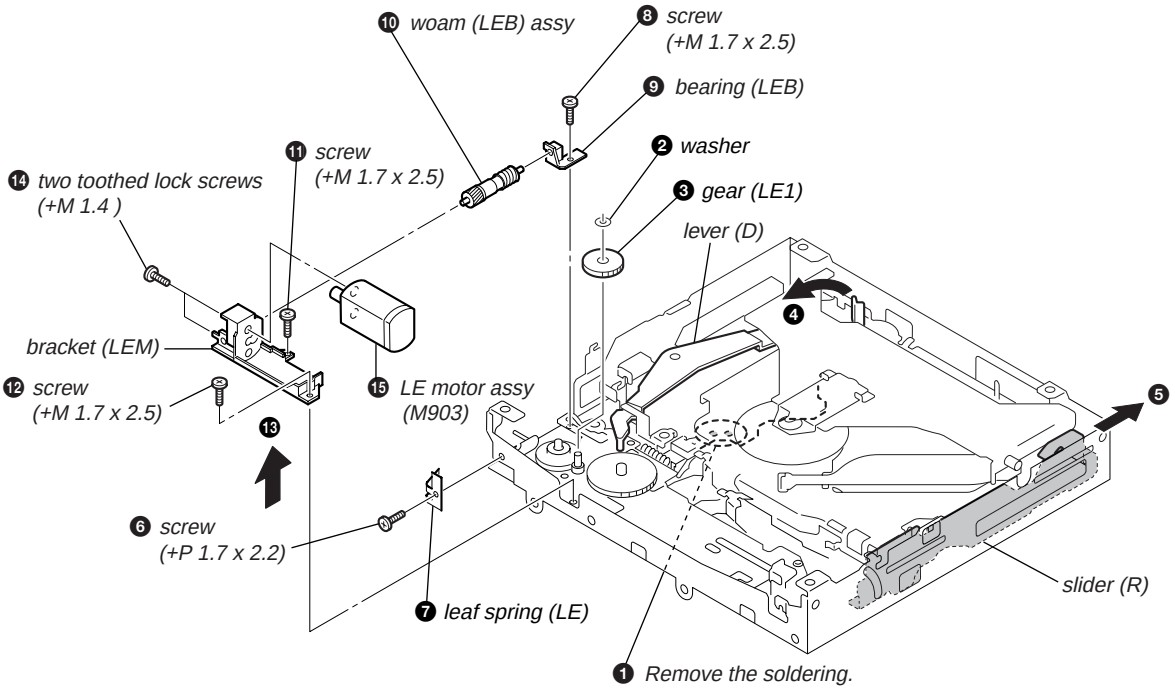
2-7. OPTICAL PICK-UP



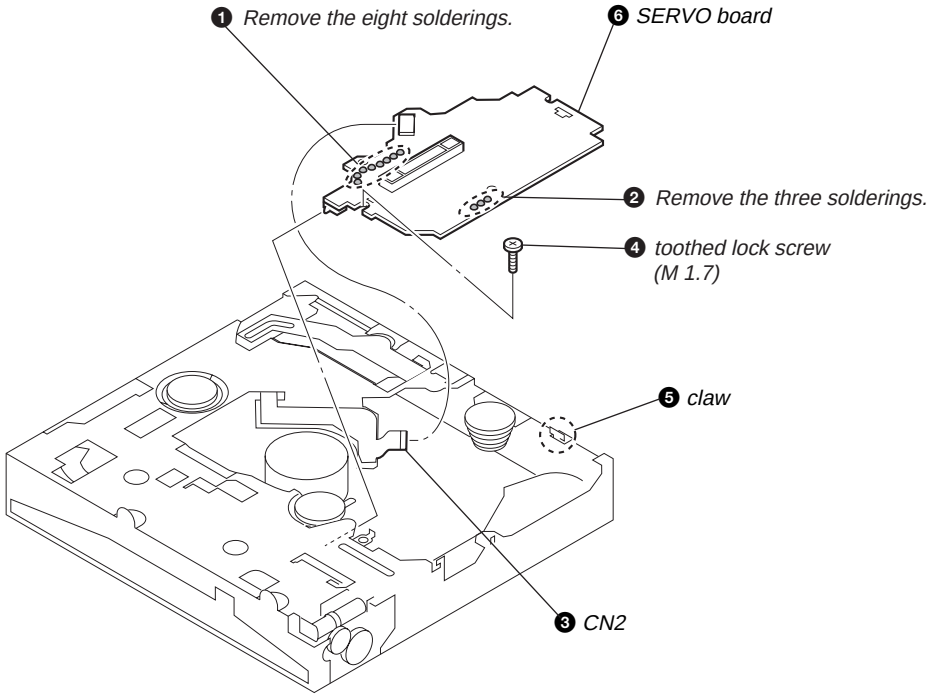
2-8. SL MOTOR ASSY (M902)



2-9. LE MOTOR ASSY (M903)



2-10. SERVO BOARD



SECTION 3
DIAGRAMS

3-1. IC PIN DESCRIPTIONS

• IC1 µPD63712GC-8EU-A (RF AMP, DIGITAL SERVO, DIGITAL SIGNAL PROCESSOR) (SERVO BOARD)

Pin No.	Pin Name	I/O	Pin Description
1	LD	O	Laser diode ON/OFF control signal output (L: laser OFF, H: laser ON)
2	PD	I	Dimmer monitor input from optical pick-up laser diode.
3	PN	I	Not used. (Fixed at L in this set)
4	AVDD	—	Analog power supply pin (+3.3 V)
5	DGND	—	Ground
6	RFOK	O	RFOK signal output to system control IC.
7	INTQ	O	CD text pack synchronization signal output to system control IC.
8	RST	I	CD reset signal input from system control IC.
9	A0	I	Command/parameter discrimination signal input from system control IC. (L: command transmission, H: parameter transmission)
10	STB	I	Data strobe signal input from system control IC.
11	SCK	I	Serial clock input from system control IC.
12	SO	O	Serial data output to system control IC.
13	SI	I	Serial data input from system control IC.
14	DVDD	—	Power supply pin (+3.3 V)
15	DAVDD	—	D/A converter power supply (+) pin (+3.3 V)
16	ROUT	O	Analog audio signal output (R-ch)
17	DAGND	—	Ground
18	REGC	—	Capacitor connection pin for SCF regulator.
19	DAGND	—	Ground
20	LOUT	O	Analog audio signal output (L-ch)
21	DAVDD	—	D/A converter power supply (+) pin (+3.3 V)
22	XVDD	—	Power supply pin (+3.3 V)
23	XTAL	O	Main system clock output (16.9344 MHz)
24	XTAL	I	Main system clock input (16.9344 MHz)
25	XGND	—	Ground
26	DVDD	—	Power supply pin (+3.3 V)
27	C1D1/FZD	O	Not used. (Open)
28	C1D2/TZD	O	Not used. (Open)
29	C2D1/RMUTE	O	CD R-ch data zero detection signal output
30	C2D2/LMUTE	O	CD L-ch data zero detection signal output
31	C2D3/SHOCK/SBSY	O	Not used. (Open)
32	LOCK/FR	O	Not used. (Open)
33	WFCK/MIRR	O	Not used. (Open)
34	RFCK/HOLD	O	Not used. (Open)
35	PLCK	O	Not used. (Open)
36	C16M	O	Not used. (Open)
37	DGND	—	Ground
38	TX	O	Not used. (Open)
39	EMPH/RAMOVER	O	Not used. (Open)
40	FLAG	O	Not used. (Open)
41	DVDD	—	Power supply pin (+3.3 V)
42	LIMIT	I	Not used. (Fixed at L in this set)
43	XTALEN	I	Oscillation circuit ON/OFF control signal input (L: ON, H: OFF) (Fixed at L in this set)
44	DGND	—	Ground
45	DIN	I	Not used. (Connect to DOUT in this set)
46	DOUT	O	Not used. (Connect to DIN in this set)
47	SCKIN	I	Not used. (Connect to SCKO in this set)
48	SCKO	O	Not used. (Connect to SCKIN in this set)
49	LRCKIN	I	Not used. (Connect to LRCK in this set)

Pin No.	Pin Name	I/O	Pin Description
50	LRCK	O	Not used. (Connect to LRCKIN in this set)
51	DVDD	—	Power supply pin (+3.3 V)
52	FD+	O	Focus servo drive PWM signal output (+)
53	FD–	O	Focus servo drive PWM signal output (–)
54	TD+	O	Tracking servo drive PWM signal output (+)
55	TD–	O	Tracking servo drive PWM signal output (–)
56	SD+	O	Sled servo drive PWM signal output (+)
57	SD–	O	Sled servo drive PWM signal output (–)
58	MD+	O	Spindle servo drive PWM signal output (+)
59	MD–	O	Spindle servo drive PWM signal output (–)
60	DGND	—	Ground
61	TESTEN	I	Test setting input (Fixed at L in this set)
62 to 66	TEST4 to TEST0	I	Test setting input (Fixed at L in this set)
67	ADGND	—	A/D converter power supply (–) pin
68	EFM	O	EFM signal output
69	ASY	I	EFM comparator reference voltage input
70	ADVDD	—	A/D converter power supply pin (+3.3 V)
71	RFI	I	RF signal input for EFM data growing.
72	EQ2	—	Not used. (Open)
73	EQ1	—	RF amplifier equalizer parts connection pin
74	RF–	I	Not used. (Open)
75	RF2–	I	RF amplifier inversion input
76	AGCO	O	RF signal output after on AGC.
77	AGCI	I	RF AGC signal amplifier input
78	RFO	O	RF signal output before on AGC.
79	ATEST	I	Not used. (Open)
80	C3T	—	Capacitor connection pin for 3T detection.
81	AGND	—	Ground
82	A	I	Signal input (A) from optical pick-up detector.
83	C	I	Signal input (C) from optical pick-up detector.
84	B	I	Signal input (B) from optical pick-up detector.
85	D	I	Signal input (D) from optical pick-up detector.
86	F	I	Signal input (F) from optical pick-up detector.
87	E	I	Signal input (E) from optical pick-up detector.
88	VREFIN	I	Reference voltage (+1.65 V) input
89	AVDD	—	Analog power supply pin (+3.3 V)
90	REFOUT	O	Reference voltage (+1.65 V) output
91	REFC	—	Capacitor connection pin for reference voltage output.
92	FE–	I	Focus error signal amplifier inversion input
93	FEO	O	Focus error signal amplifier output
94	ADCIN	I	Not used. (Open)
95	TE-	I	Tracking error signal amplifier inversion input
96	TEO	O	Tracking error signal amplifier before output
97	TE2	O	Tracking error signal amplifier after output
98	TEC	I	Tracking error signal comparator input
99	AGND	—	Ground
100	PWMSW	I	Not used. (Fixed at L in this set)

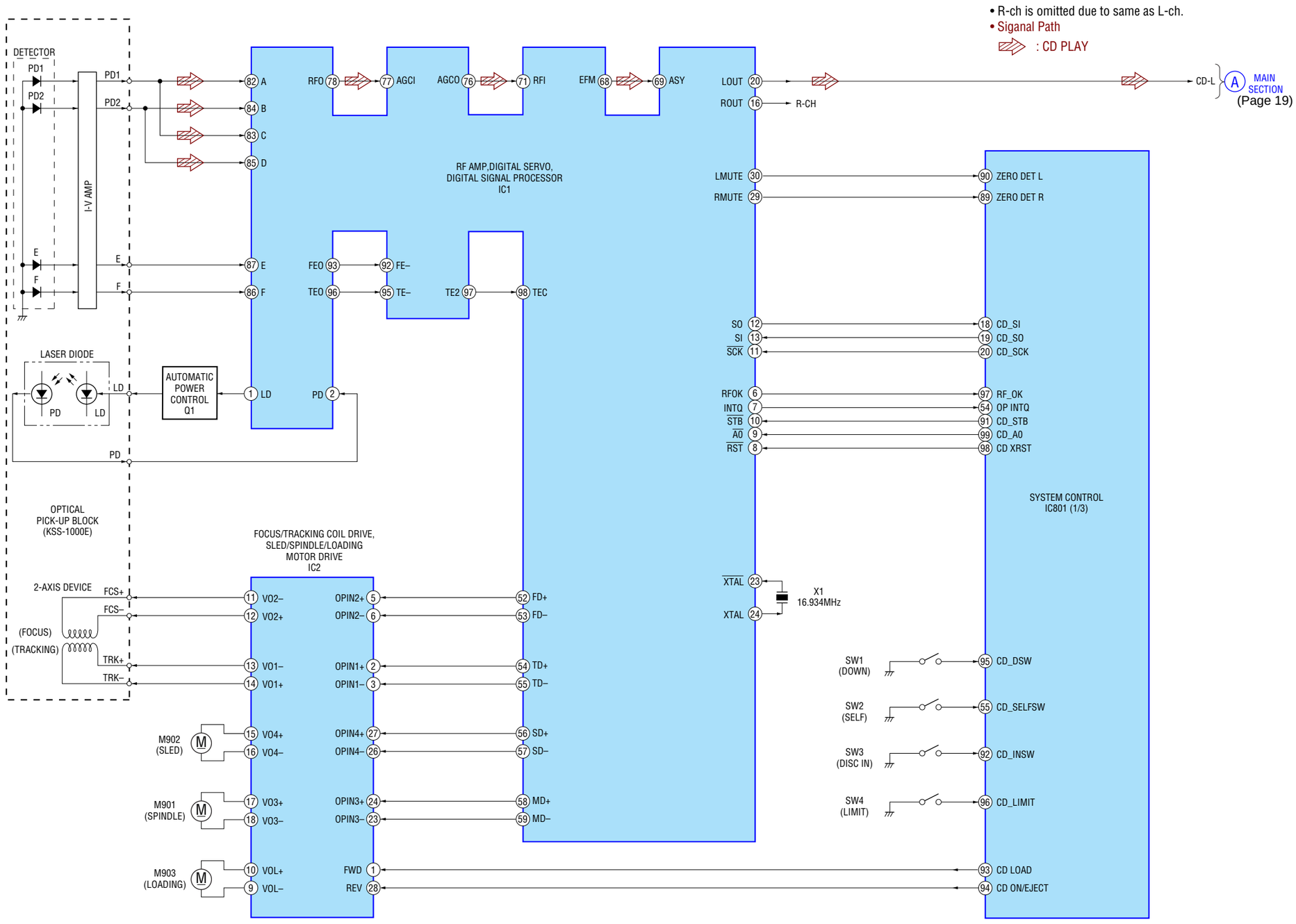
• IC801 MB90477PF-G-168-BNDE1 (SYSTEM CONTROL) (MAIN BOARD (2/2))

Pin No.	Pin Name	I/O	Pin Description
1	ATT	O	Audio mute control signal output
2 to 4	NC	—	Not used in this set. (Open)
5	BEEP	O	Beep signal output to power amp IC
6	VOL ATT	O	Electrical volume ATT control output
7 to 10	NC	—	Not used in this set. (Open)
11	VSS	—	Ground pin
12 to 14	NC	—	Not used in this set. (Open)
15	TU ATT	O	Tuner mute control output
16, 17	NC	—	Not used in this set. (Open)
18	CD SI	I	CD servo serial data signal input
19	CD SO	O	CD servo serial data signal output
20	CD SCK	O	CD servo serial clock signal output
21	RE 0	I	Rotary encoder signal input 0
22	RE 1	I	Rotary encoder signal input 1
23	VCC+3.3	—	Power supply pin (+3.3 V)
24	EEP SIO	I/O	Serial data signal input/output for EEPROM communication
25	EEP SCK	O	Serial clock signal output for EEPROM communication
26	SHUT SW	I	Shutter switch open/close detect signal input “L”: Panel open, “H”: Panel close Not used in this set. (Open)
27	LCD CE	O	Chip enable signal output to LCD driver IC
28	LCD SO	O	Serial data signal output to LCD driver IC Flash: UART serial out
29	LCD SCK	O	Serial clock signal output to LCD driver IC
30	NC	—	Not used in this set. (Open)
31	STB	O	Standby signal output to power amp IC
32	AUX	—	Not used in this set. (Open)
33	IIC SCK	O	IIC bus serial clock signal output
34	IIC SIO	I/O	IIC bus serial data signal input/output
35	VCC+3.3	—	Power supply pin (+3.3 V) (for A/D converter)
36	AVRH+3.3	—	External reference power supply (+3.3 V) (for A/D converter)
37	AVSS	—	Ground pin (for A/D converter)
38, 39	KEY IN0, 1	I	Key signal input
40	NC	—	Not used in this set. (Open)
41	RC IN0	I	Rotary commander key signal input
42	VSS	—	Ground pin
43, 44	NC	—	Not used in this set. (Fixed at “L”.)
45	VSM	I	S meter voltage detect signal input
46	DST SEL	I	Destination select pin
47	KEY ACK	I	Key acknowledge detect signal input
48	NC	—	Not used in this set. (Open)
49, 50	MD0, 1	I	Input for operation mode designation (Fixed at “H”.)
51	MD2	I	Input for operation mode designation (Fixed at “L”.)
52	NC	—	Not used in this set. (Open)
53	BU IN	I	Back up power supply detect signal input
54	OP REQ/INTQ	O	OP REQ/INTQ select signal output
55	CD SELFSW	I	CD mechanism self load position detect switch signal input
56	DIAG	I	Condition input from power amp IC
57	TU ATT IN	I	Tuner ATT signal input
58	UNI SI	I	Serial data signal input
59	UNI SO	O	Serial data signal output
60	UNI SCK	O	Serial clock signal output
61	BUS ON	O	Bus on signal output
62	SYS RST	O	System reset signal output

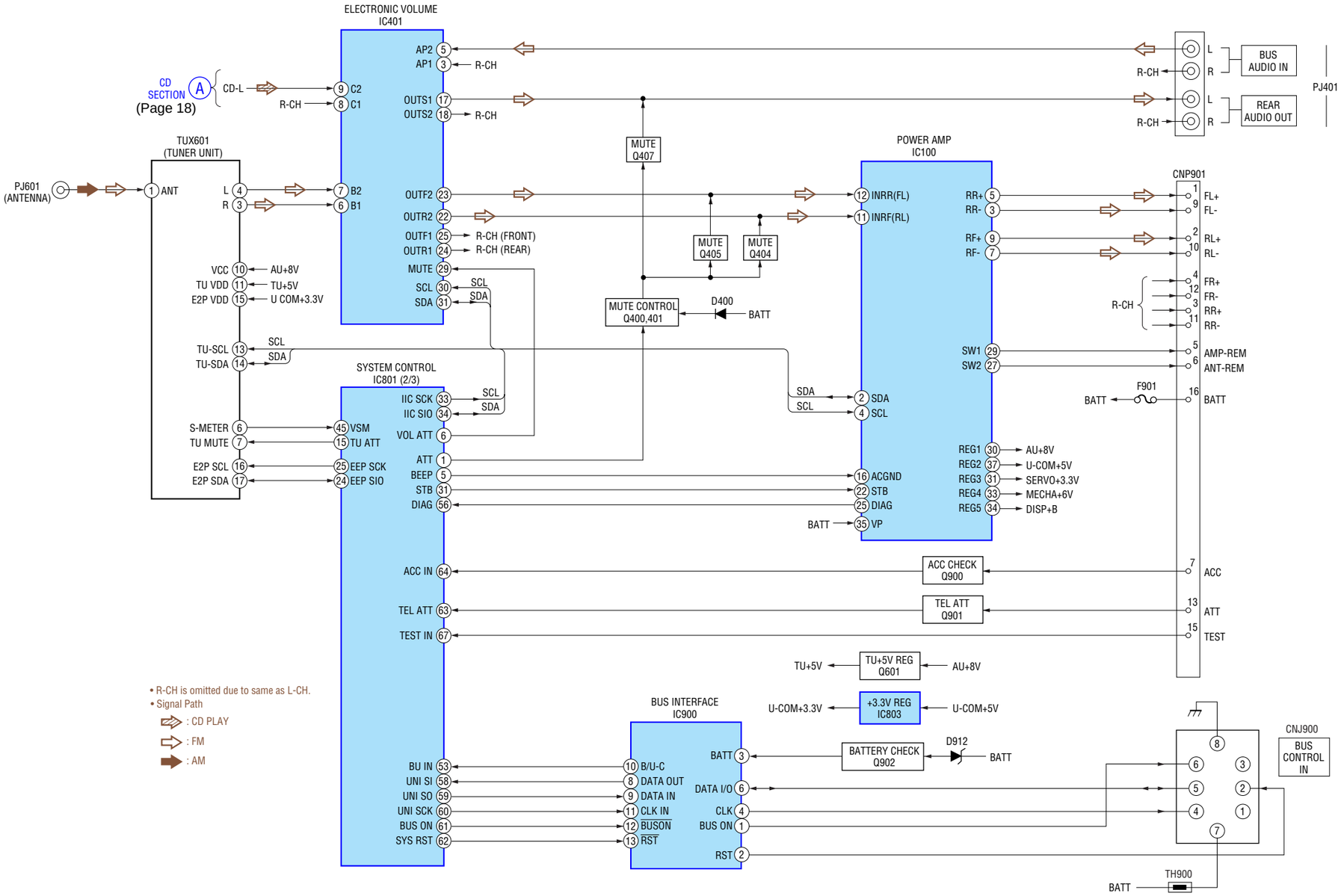
Pin No.	Pin Name	I/O	Pin Description
63	TEL ATT	O	TEL ATT signal output
64	ACC IN	I	Accessory power supply detect signal input
65	SIRCS	I	Remote control signal (infrared rays) input
66	RAM BU	O	Not used in this set. (Fixed at “L”.)
67	TEST IN	I	Test mode detect signal input
68	FLASH W	I	Memory mode changeover signal input Normally “H” input (single chip mode) “L” after reset: Flash write mode
69	NOSE SW	I	Nose detect switch signal input
70, 71	NC	—	Not used in this set. (Open)
72	DOOR SW	I	Front panel open/close detect signal input “L” input: Panel close, “H” input: Panel open
73	DOOR IND	O	Door indicator control signal output
74	RC IN1	I	Rotary commander shift key signal input
75	XKEY ON	O	Key power supply control signal output Pin ㊼ (KEY ACK) active: “L” output
76	NC	—	Not used in this set. (Open)
77	RESET	I	Reset signal input
78	NC	—	Not used in this set. (Open)
79	X1A	—	Oscillator connect pin (32 kHz)
80	X0A	—	Oscillator connect pin (32 kHz)
81	VSS	—	Ground pin
82	X0	—	Oscillator connect pin (3.68 MHz)
83	X1	—	Oscillator connect pin (3.68 MHz)
84	VCC+3.3	—	Power supply pin (+3.3 V)
85 to 88	NC	—	Not used in this set. (Open)
89	ZERO DET R	I	Mechanism deck mute zero closs detect signal input R
90	ZERO DET L	I	Mechanism deck mute zero closs detect signal input L
91	CD STB	O	CD servo data strob signal output Timing of data latch: “L” output
92	CD IN SW	I	CD mechanism IN-SW detect signal input
93	CD LOAD	O	CD mechanism loading motor control signal output
94	CD ON/EJECT	O	CD mechanism eject motor control signal output
95	CDM ON/D SW	I	CD mechanism DSW detect signal input
96	CD LIMIT	I	CD mechanism IN-LIMIT SW signal input
97	RFOK	I	CD servo RFOK signal input
98	CD XRST	O	CD servo reset signal output
99	CD A0	O	CD servo command/parameter identification signal output Command transmission: “L” output, parameter transmission: “H” output
100	NC	—	Not used in this set. (Open)

17

3-2. BLOCK DIAGRAM — CD SECTION —

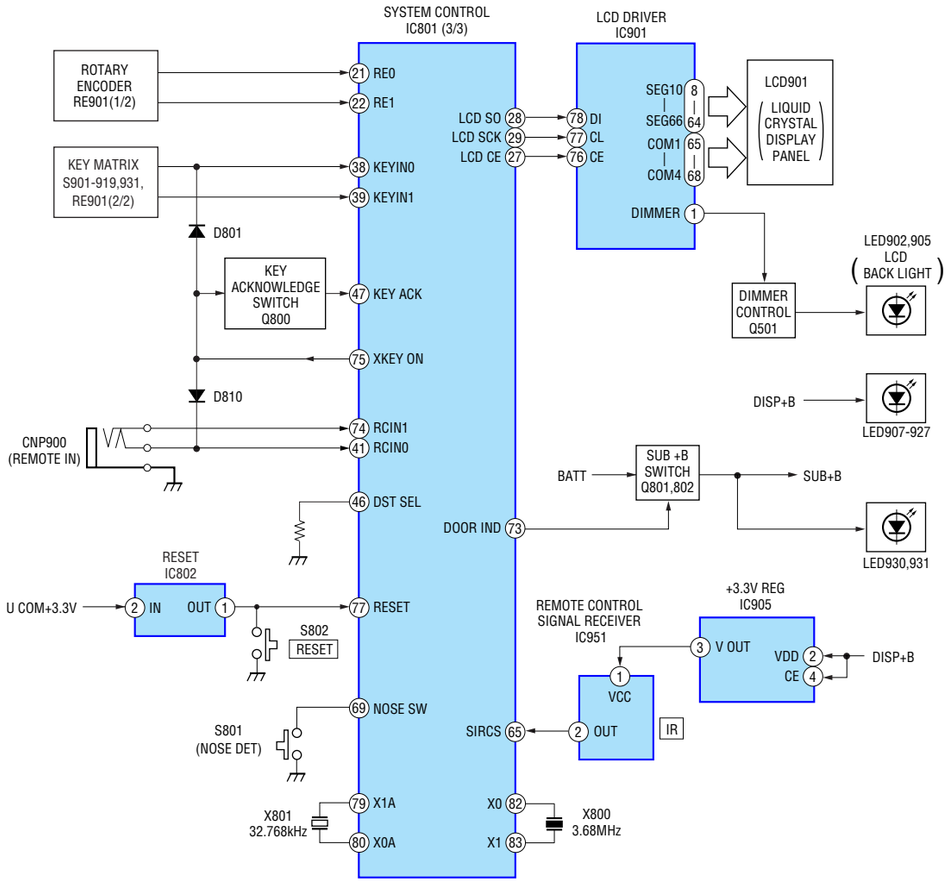


3-3. BLOCK DIAGRAM — MAIN SECTION —

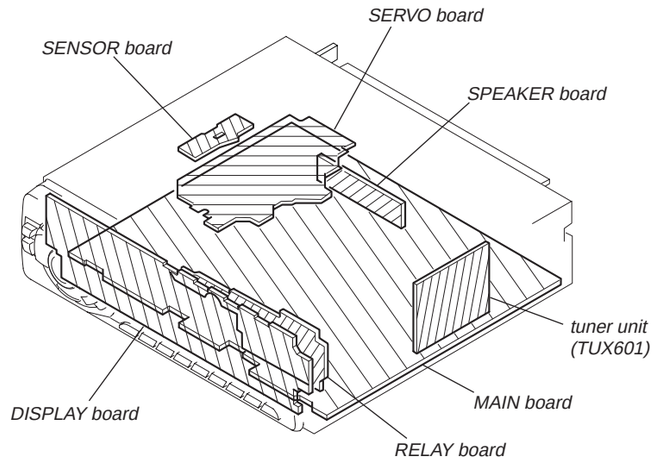


- R-CH is omitted due to same as L-CH.
- Signal Path
  - : CD PLAY
  - : FM
  - : AM

3-4. BLOCK DIAGRAM — DISPLAY SECTION —



3-5. CIRCUIT BOARDS LOCATION



3-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- ▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- CD mechanism section
  no mark : CD PLAY
- Main (1/2), (2/2) and Display sections
  no mark : FM
  ( ) : AM
  < > : CD PLAY
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD PLAY
  ⇨ : FM
  ➡ : AM
- Abbreviation
  CND : Canadian model.

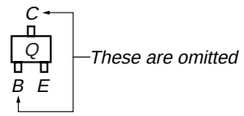
For printed wiring boards.

Note:

- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ○ : Through hole.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.



These are omitted

These are omitted

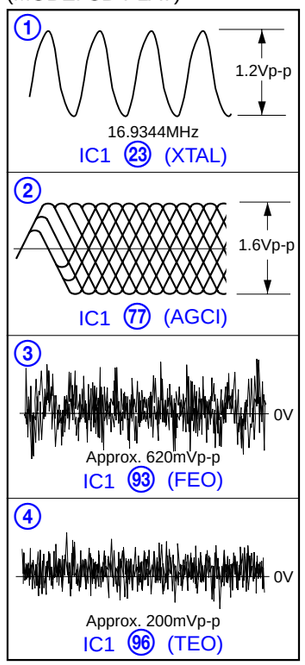
These are omitted

- Abbreviation
  CND : Canadian model.

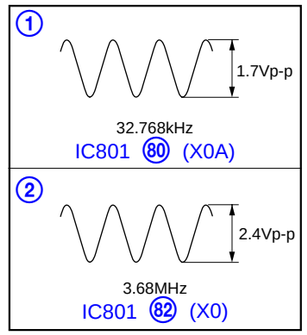
3-7. WAVEFORMS

— Servo Board —

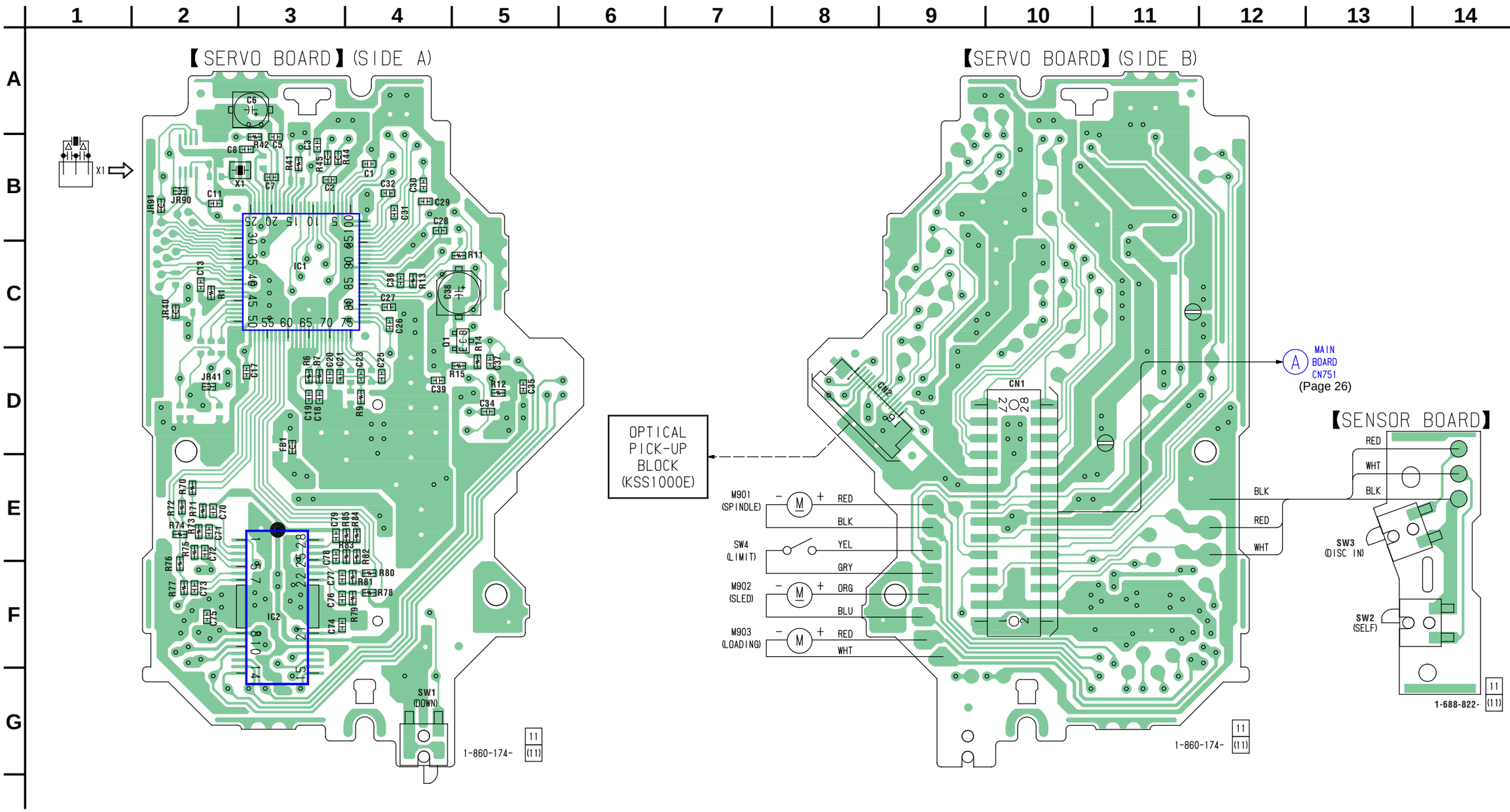
(MODE: CD PLAY)



— Main Board —



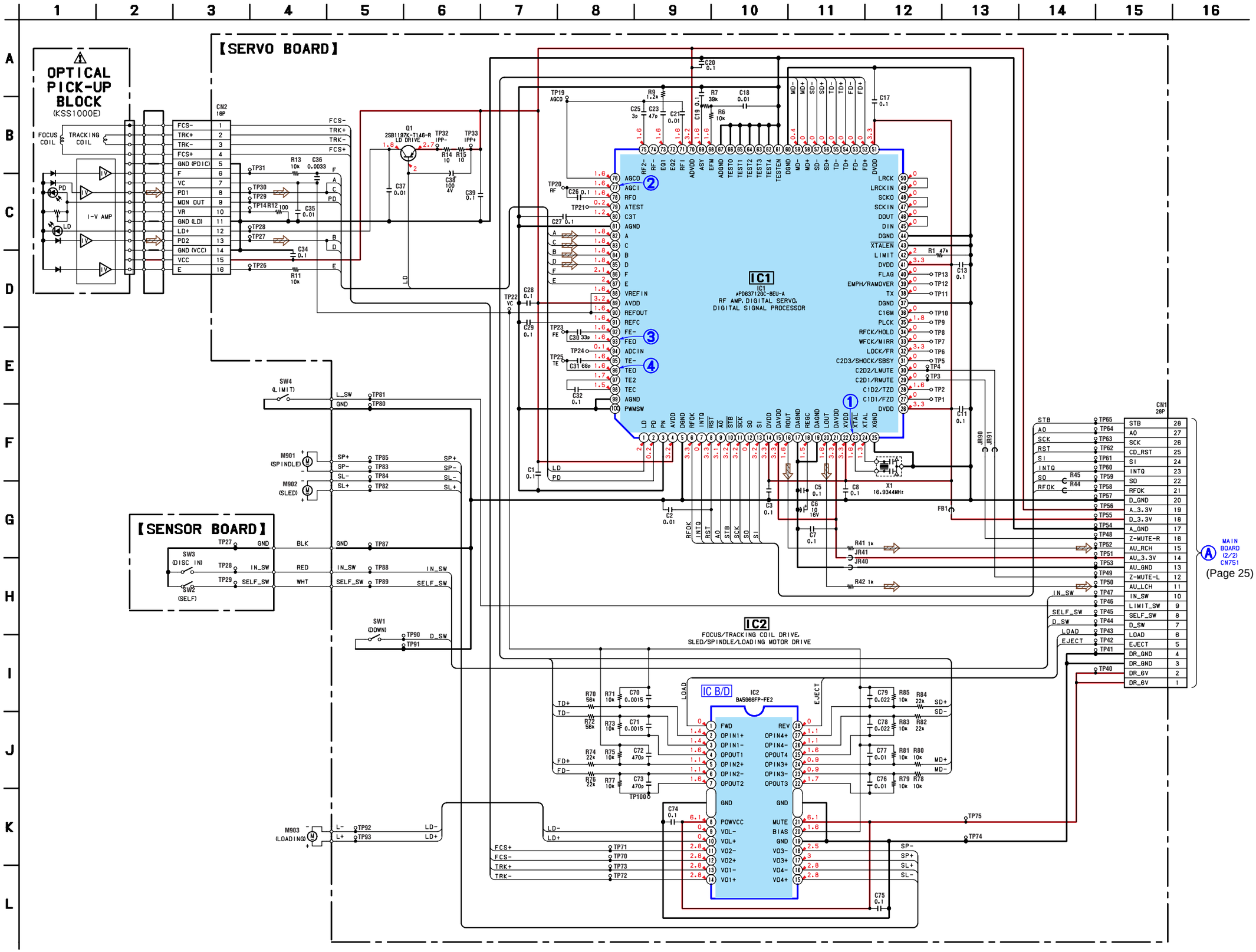
3-8. PRINTED WIRING BOARDS — CD MECHANISM SECTION — • Refer to page 20 for Circuit Boards Location. : Uses unleaded solder.



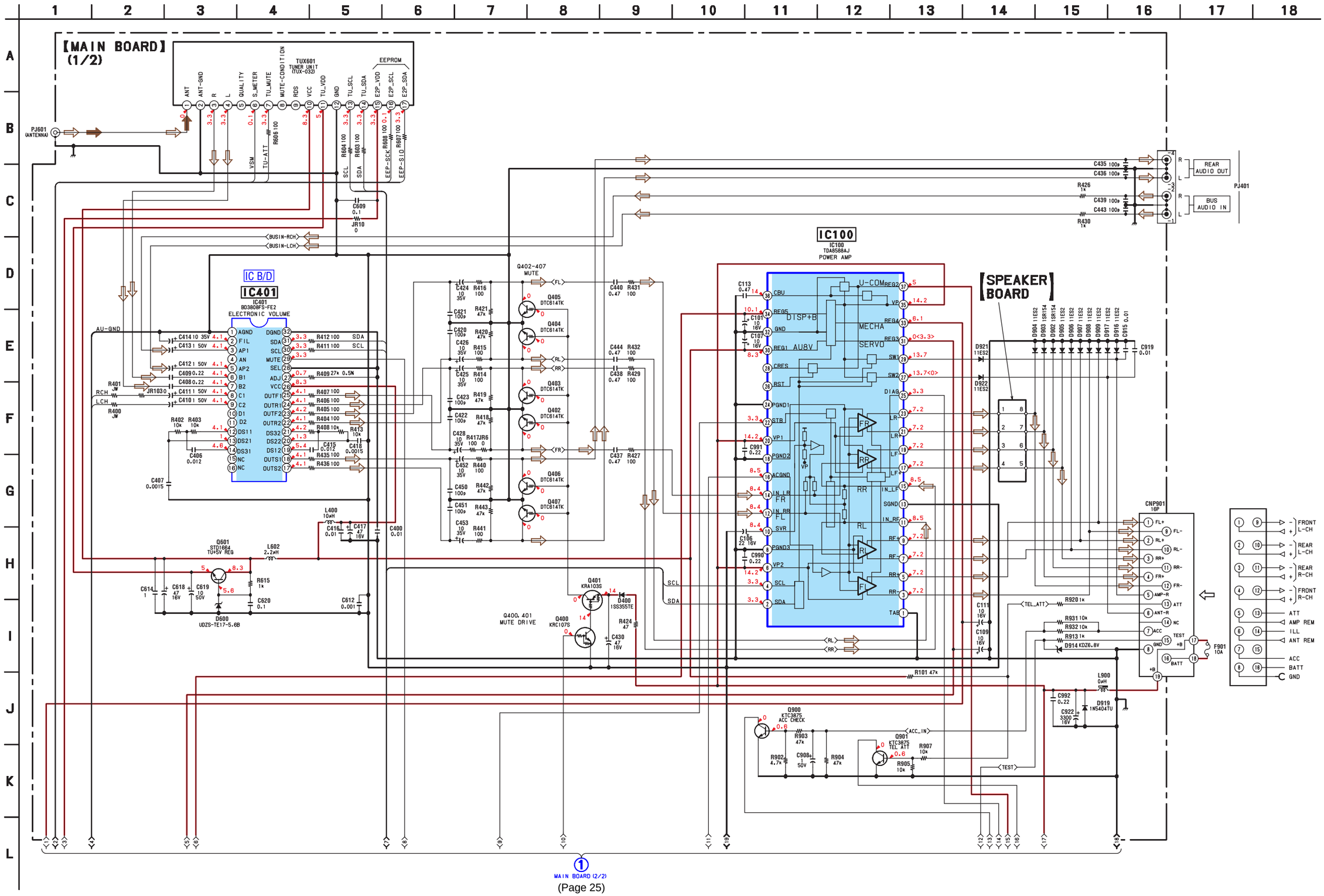
• Refer to page 21 for Waveforms.

3-9. SCHEMATIC DIAGRAM — CD MECHANISM SECTION —

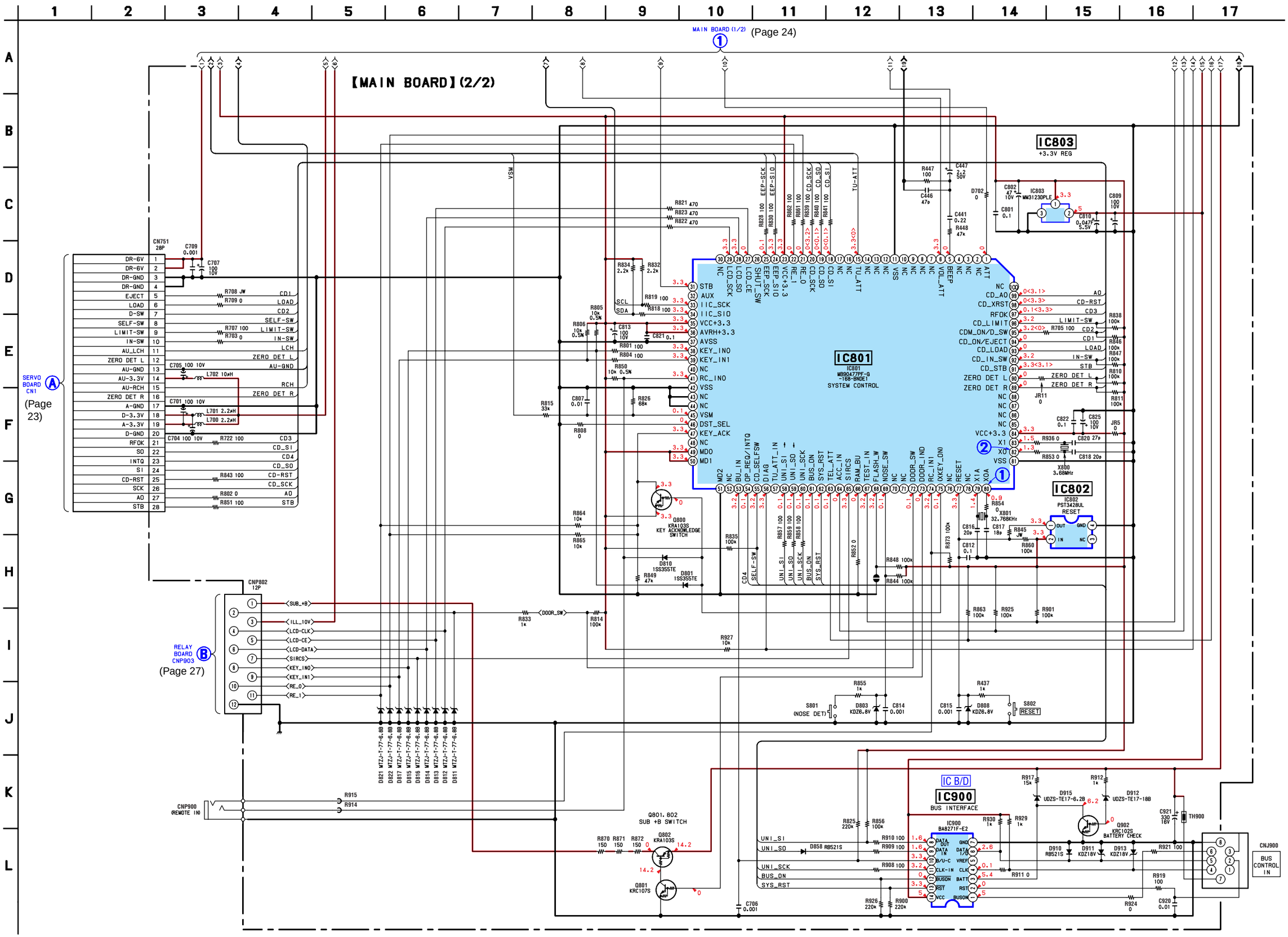
• Refer to page 29 for IC Block Diagram.



3-10. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 30 for IC Block Diagram.



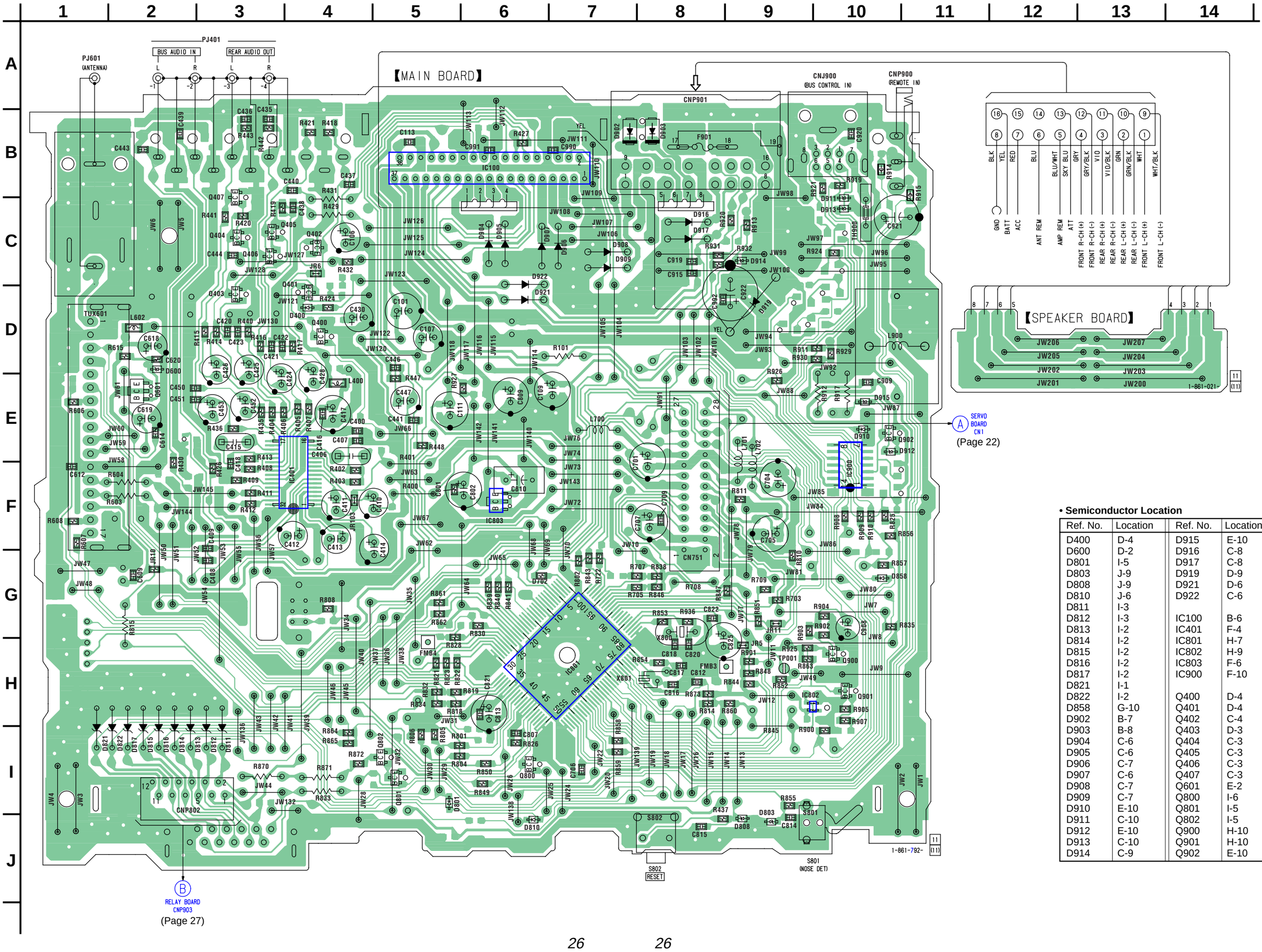
3-11. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • Refer to page 21 for Waveforms.



3-12. PRINTED WIRING BOARDS — MAIN SECTION —

• Refer to page 20 for Circuit Boards Location.

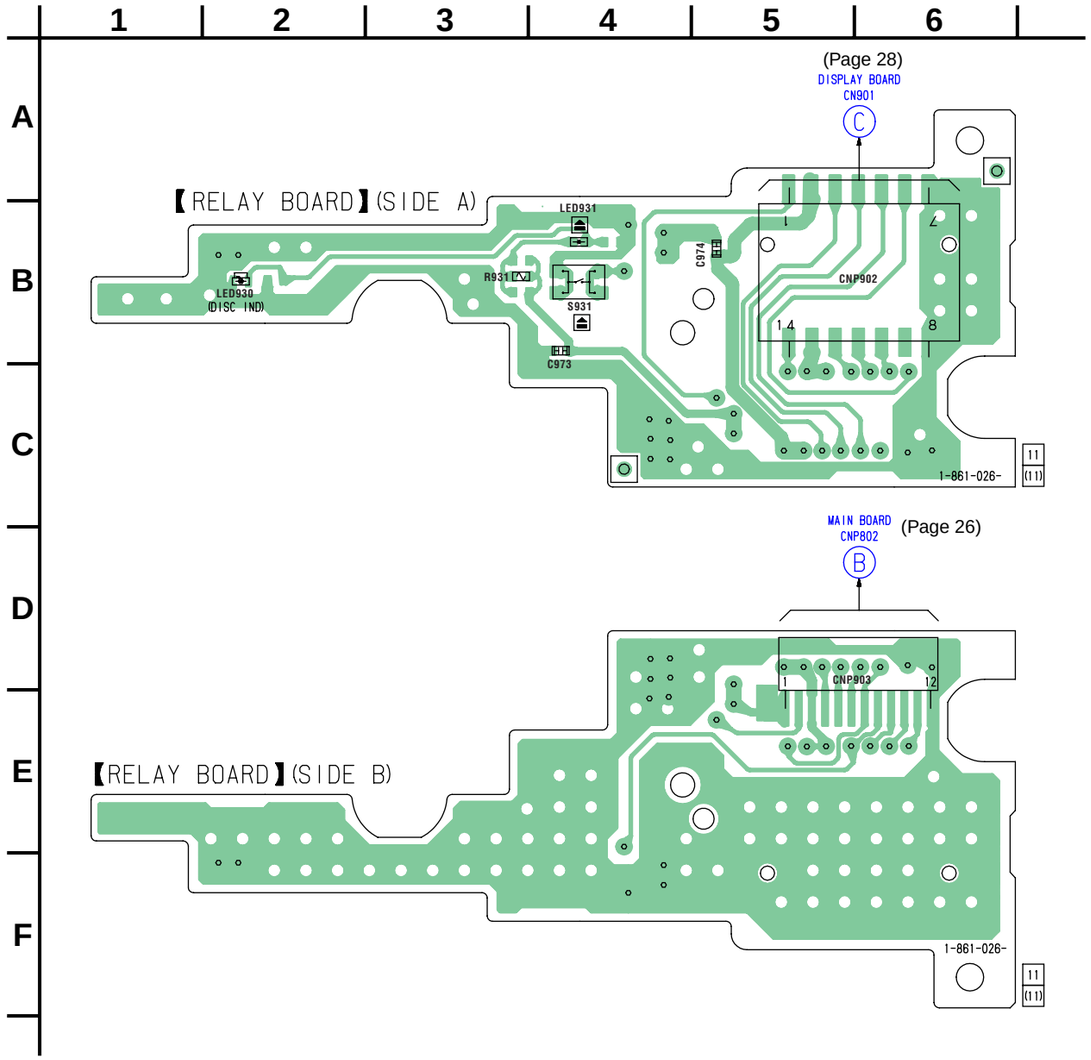
: Uses unleaded solder.



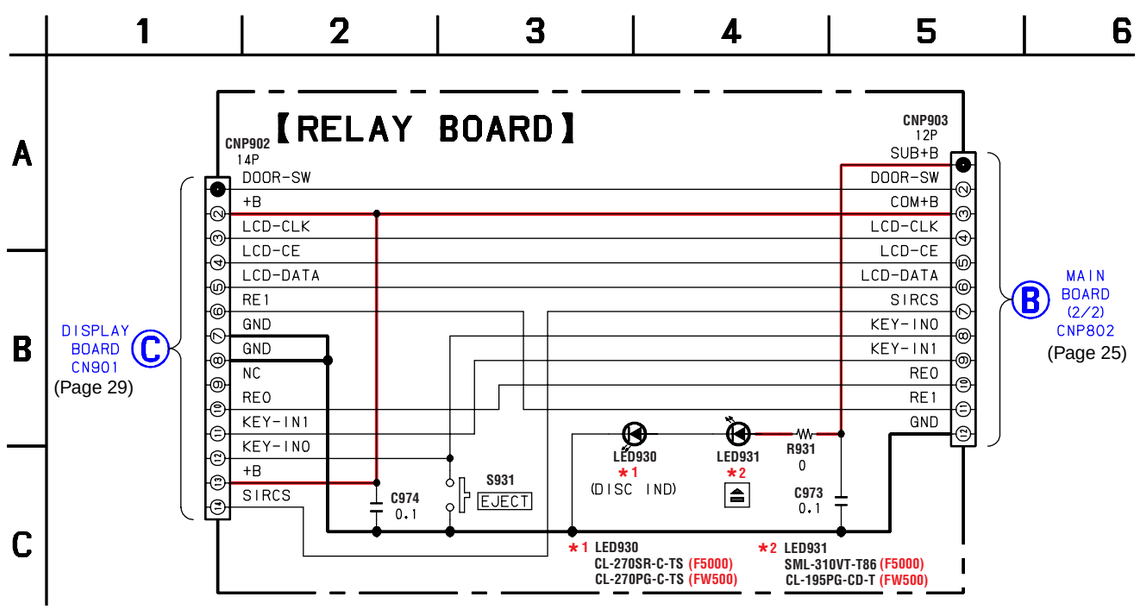
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D400	D-4	D915	E-10
D600	D-2	D916	C-8
D801	I-5	D917	C-8
D803	J-9	D919	D-9
D808	J-9	D921	D-6
D810	J-6	D922	C-6
D811	I-3		
D812	I-3	IC100	B-6
D813	I-2	IC401	F-4
D814	I-2	IC801	H-7
D815	I-2	IC802	H-9
D816	I-2	IC803	F-6
D817	I-2	IC900	F-10
D821	I-1		
D822	I-2	Q400	D-4
D858	G-10	Q401	D-4
D902	B-7	Q402	C-4
D903	B-8	Q403	D-3
D904	C-6	Q404	C-3
D905	C-6	Q405	C-3
D906	C-7	Q406	C-3
D907	C-6	Q407	C-3
D908	C-7	Q601	E-2
D909	C-7	Q800	I-6
D910	E-10	Q801	I-5
D911	C-10	Q802	I-5
D912	E-10	Q900	H-10
D913	C-10	Q901	H-10
D914	C-9	Q902	E-10

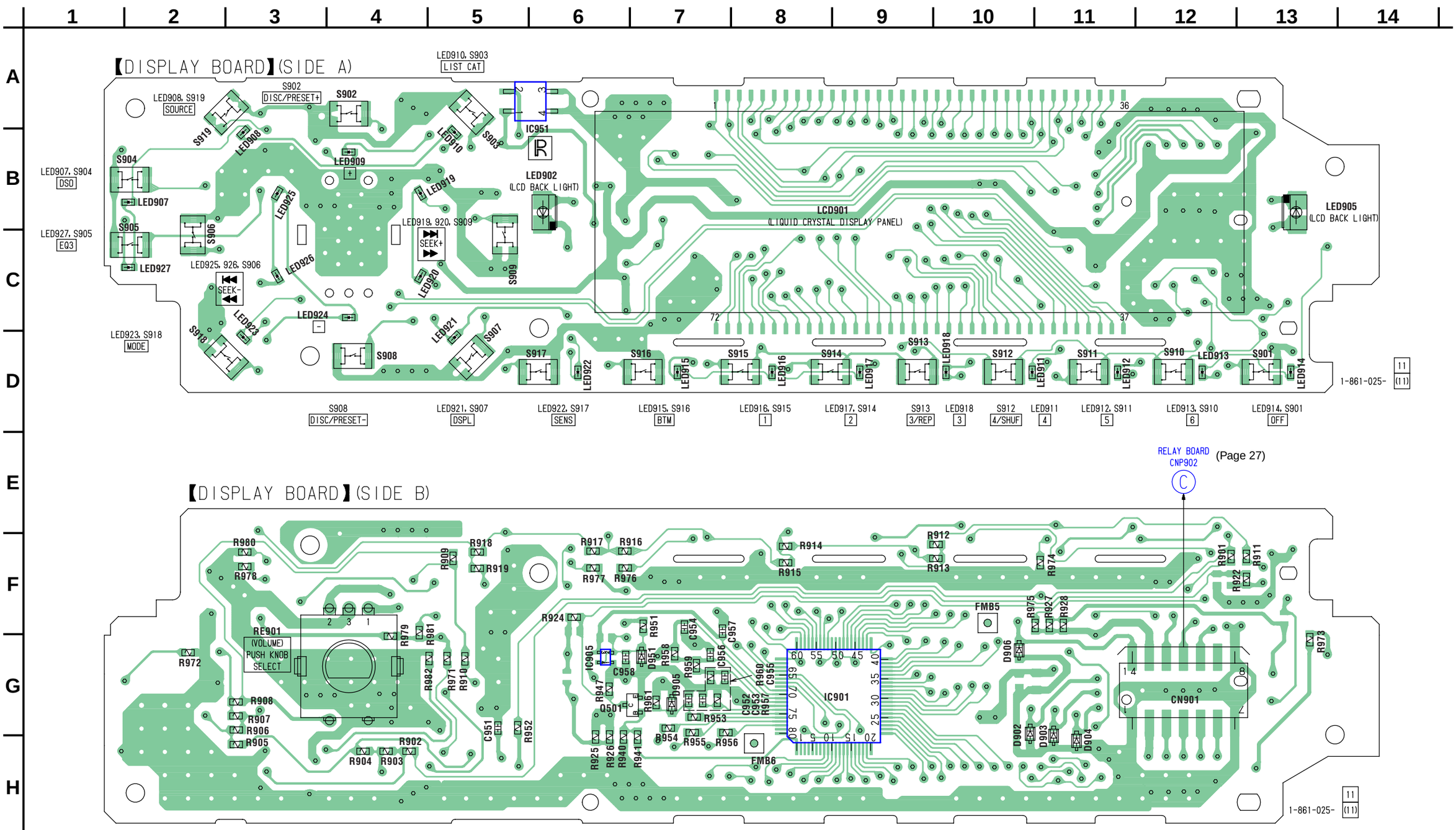
3-13. PRINTED WIRING BOARD — RELAY SECTION — • Refer to page 20 for Circuit Boards Location. : Uses unleaded solder.



3-14. SCHEMATIC DIAGRAM — RELAY SECTION —



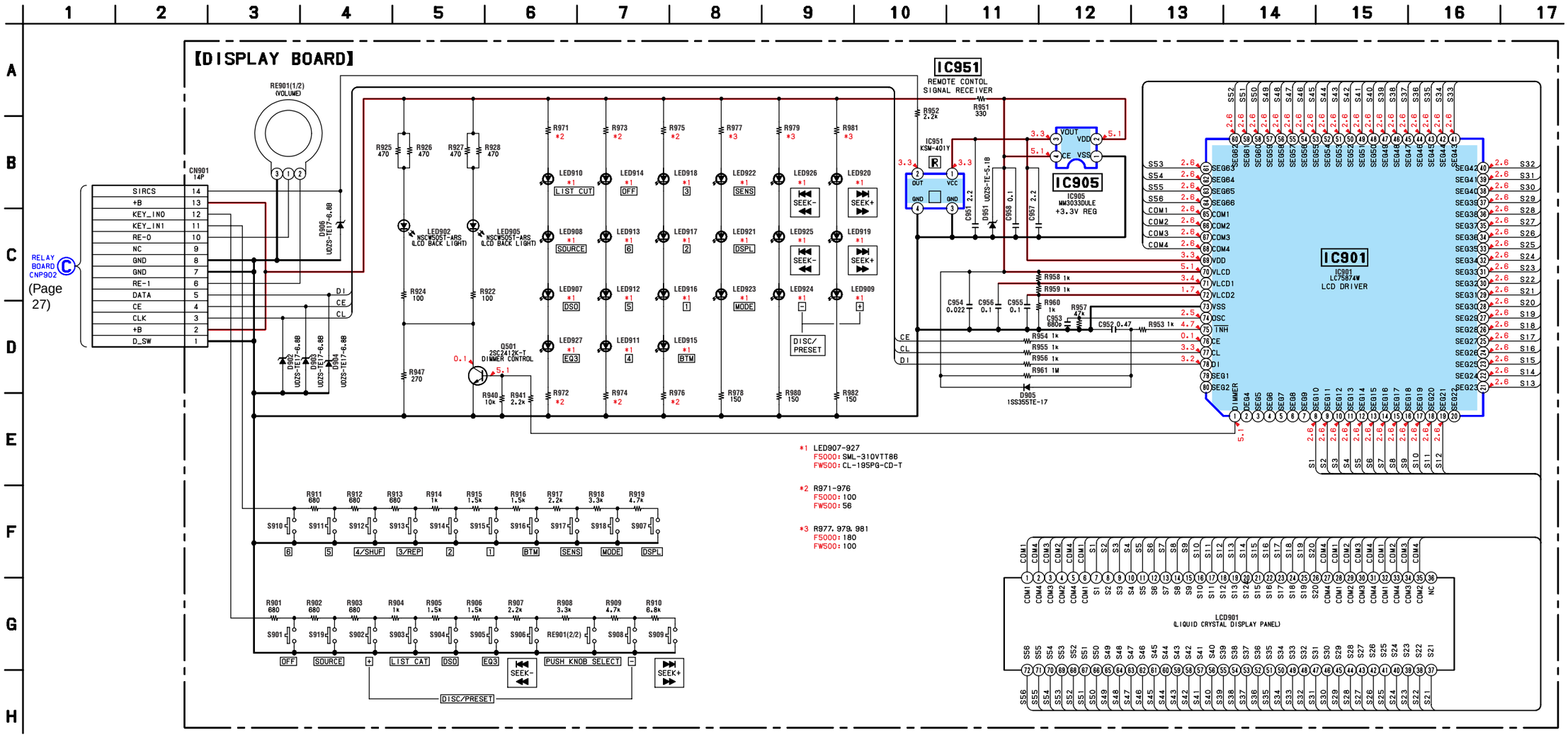
3-15. PRINTED WIRING BOARD — DISPLAY SECTION — • Refer to page 20 for Circuit Boards Location. : Uses unleaded solder.



• **Semiconductor Location**

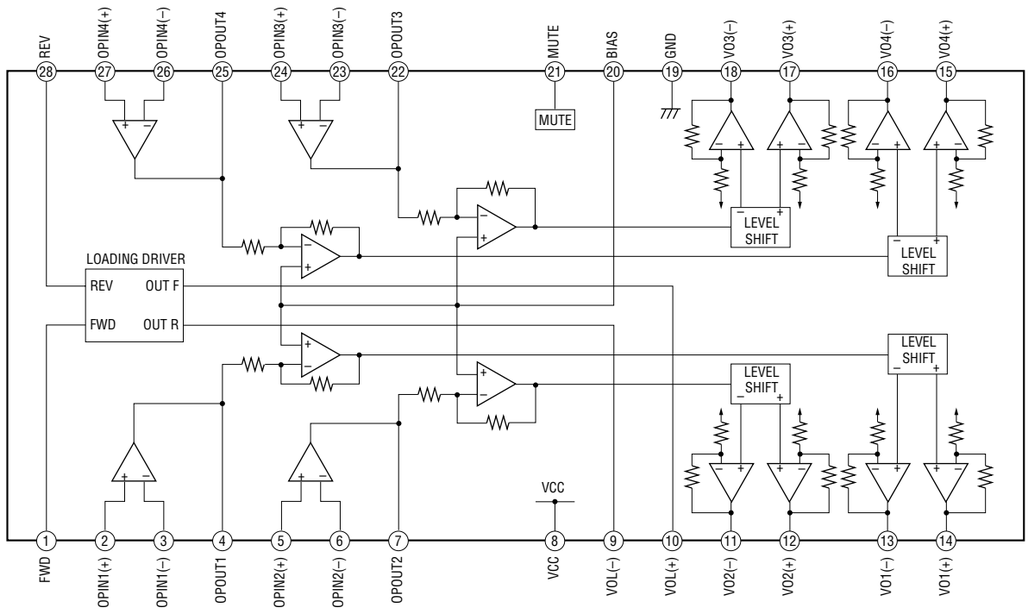
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D902	H-10	LED905	B-13	LED918	D-10
D903	H-11	LED907	B-2	LED919	B-4
D904	H-11	LED908	B-3	LED920	C-4
D905	G-7	LED909	B-4	LED921	D-5
D906	G-10	LED910	B-5	LED922	D-6
D951	G-7	LED911	D-10	LED923	D-3
		LED912	D-11	LED924	C-4
IC901	G-9	LED913	D-12	LED925	B-3
IC905	G-6	LED914	D-13	LED926	C-3
IC951	A-6	LED915	D-7	LED927	C-2
		LED916	D-8		
LED902	B-6	LED917	D-9	Q501	G-6

3-16. SCHEMATIC DIAGRAM — DISPLAY SECTION —

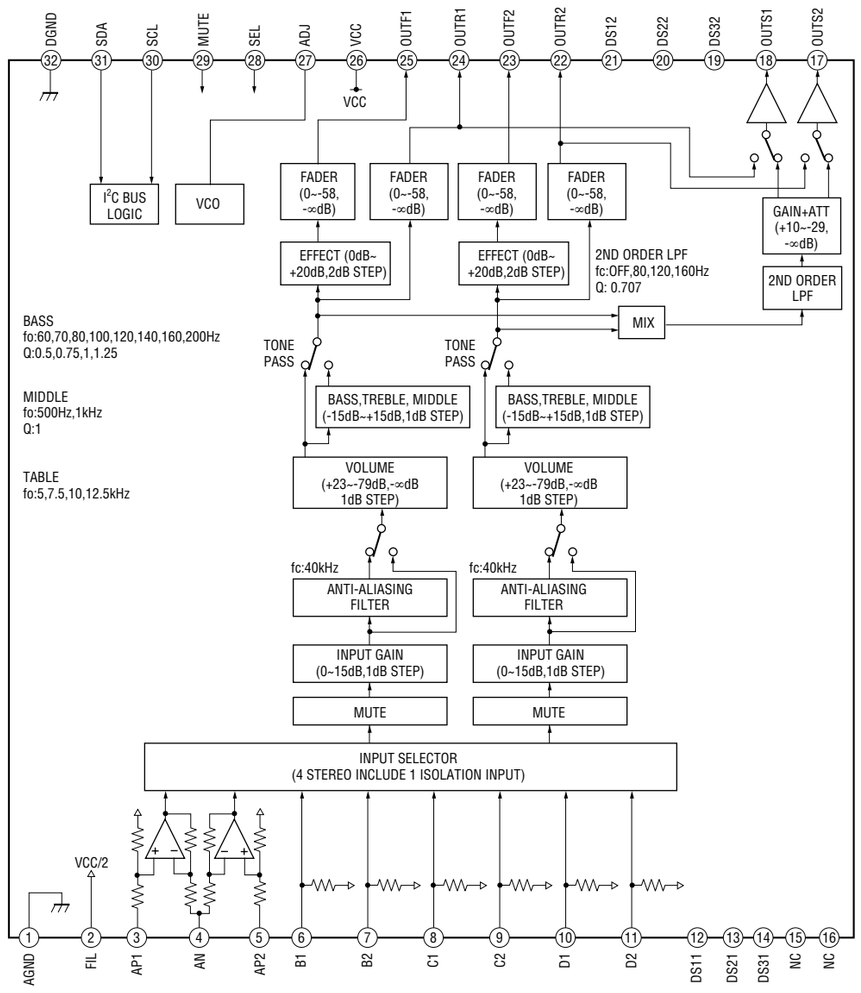


3-17. IC BLOCK DIAGRAMS

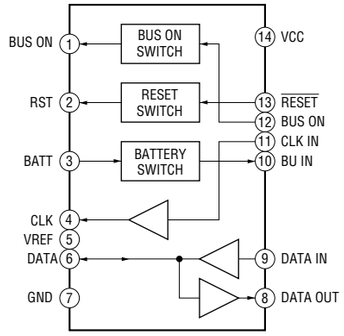
IC2 BA5966FP-FE2 (SERVO Board)



IC401 BD3808FS (MAIN Board)



IC900 BA8270F (MAIN Board)



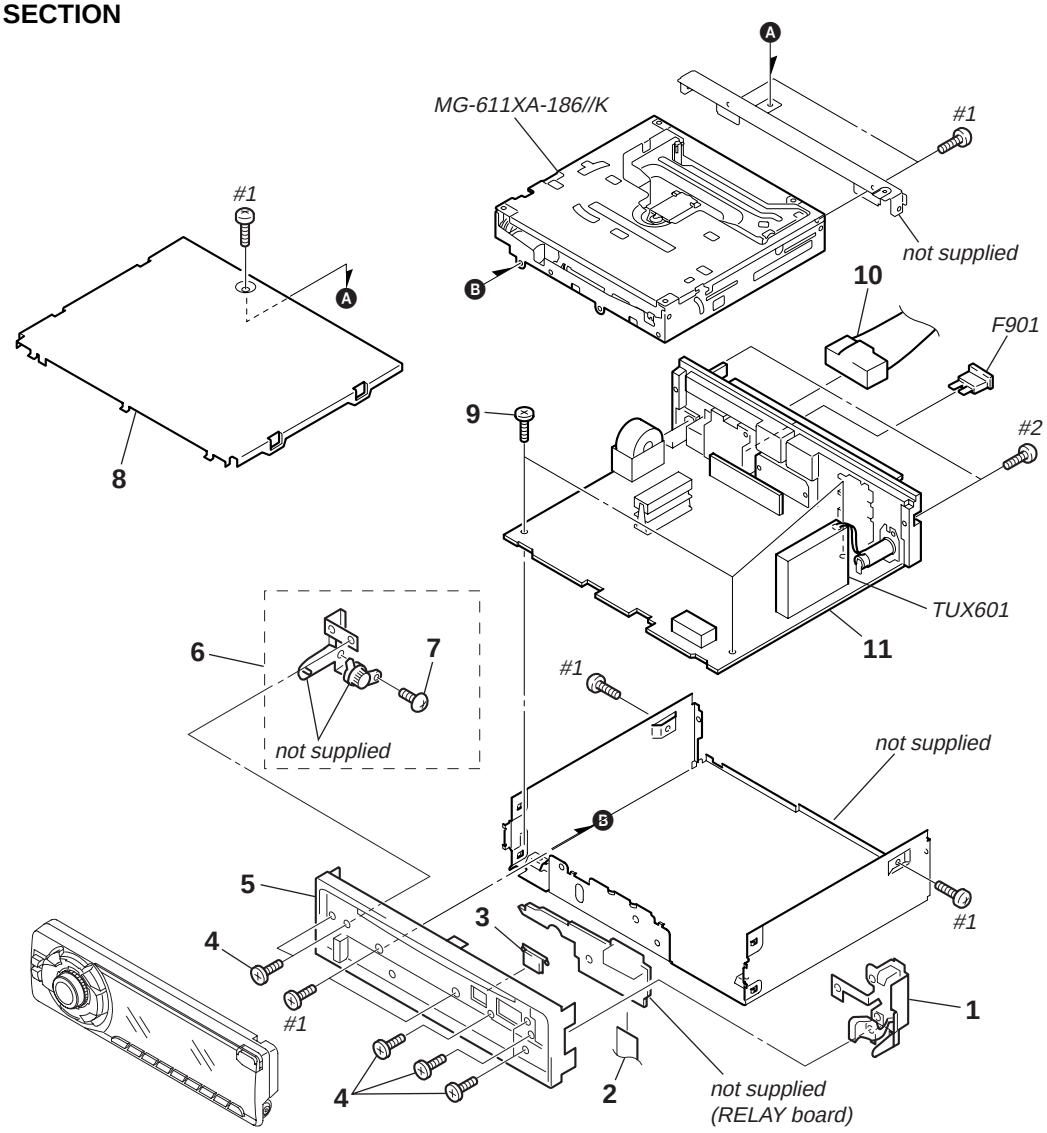
SECTION 4
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories are given in the last of this parts list.
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

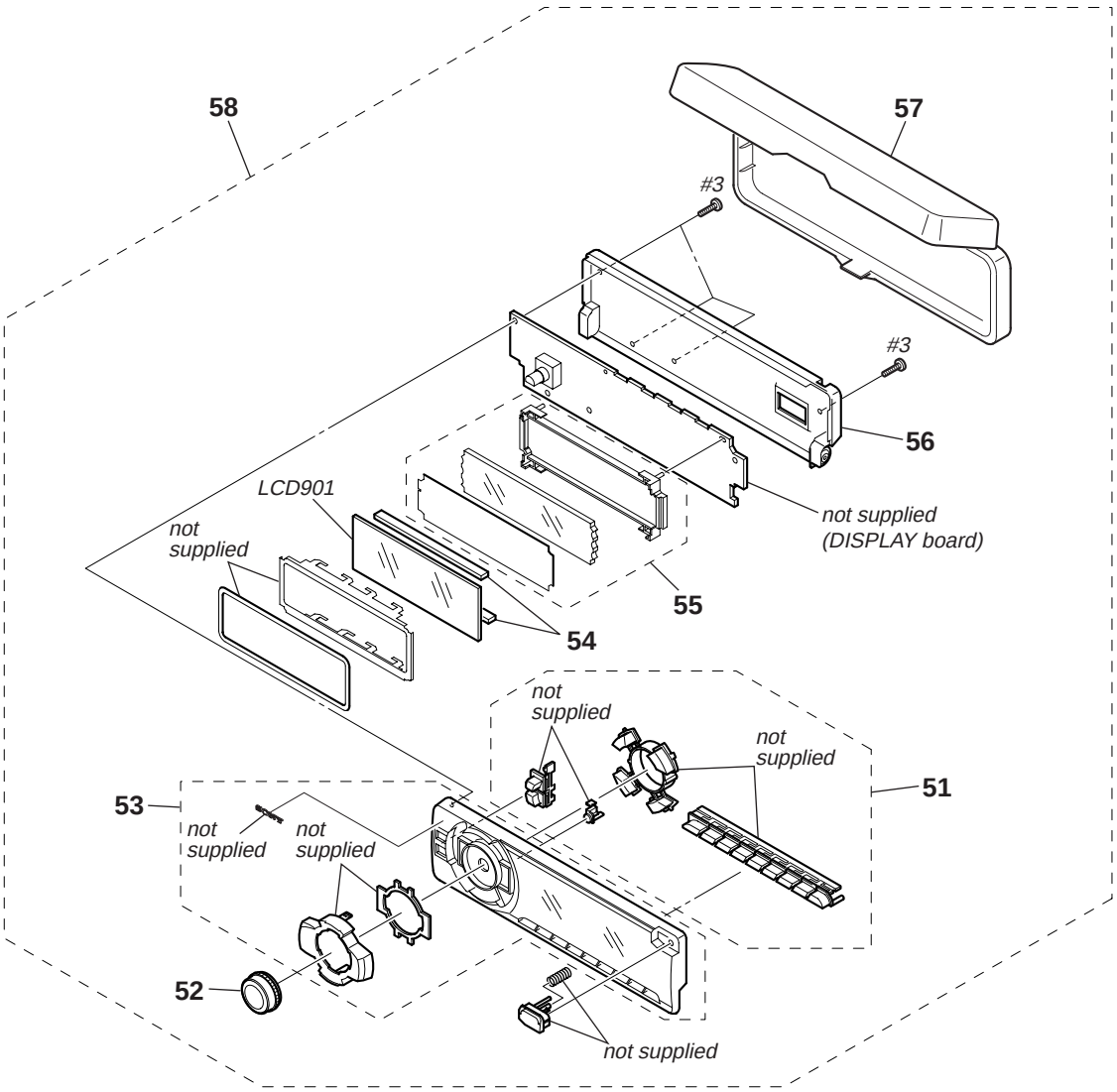
4-1. MAIN SECTION



Ref. No.	Part No.	Description	Remark
1	X-3384-273-1	LOCK ASSY	
2	1-792-173-11	CABLE, FLAT (FFC) 12P	
3	3-246-030-01	BUTTON (EJECT)	
4	3-261-903-01	SCREW (+BTT 2X5)	
5	X-3384-270-1	PANEL ASSY (CD), SUB	
6	X-3384-271-1	GEAR ASSY	
7	3-713-786-51	SCREW +P 2X3	
* 8	3-246-006-31	COVER	

Ref. No.	Part No.	Description	Remark
9	3-922-535-11	SCREW (+BTT)	
10	1-776-207-82	CORD (WITH CONNECTOR) (POWER)	
11	A-3283-503-A	MAIN BOARD, COMPLETE	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TUX601	A-3220-961-A	TUNER UNIT (TUX-032)	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)	

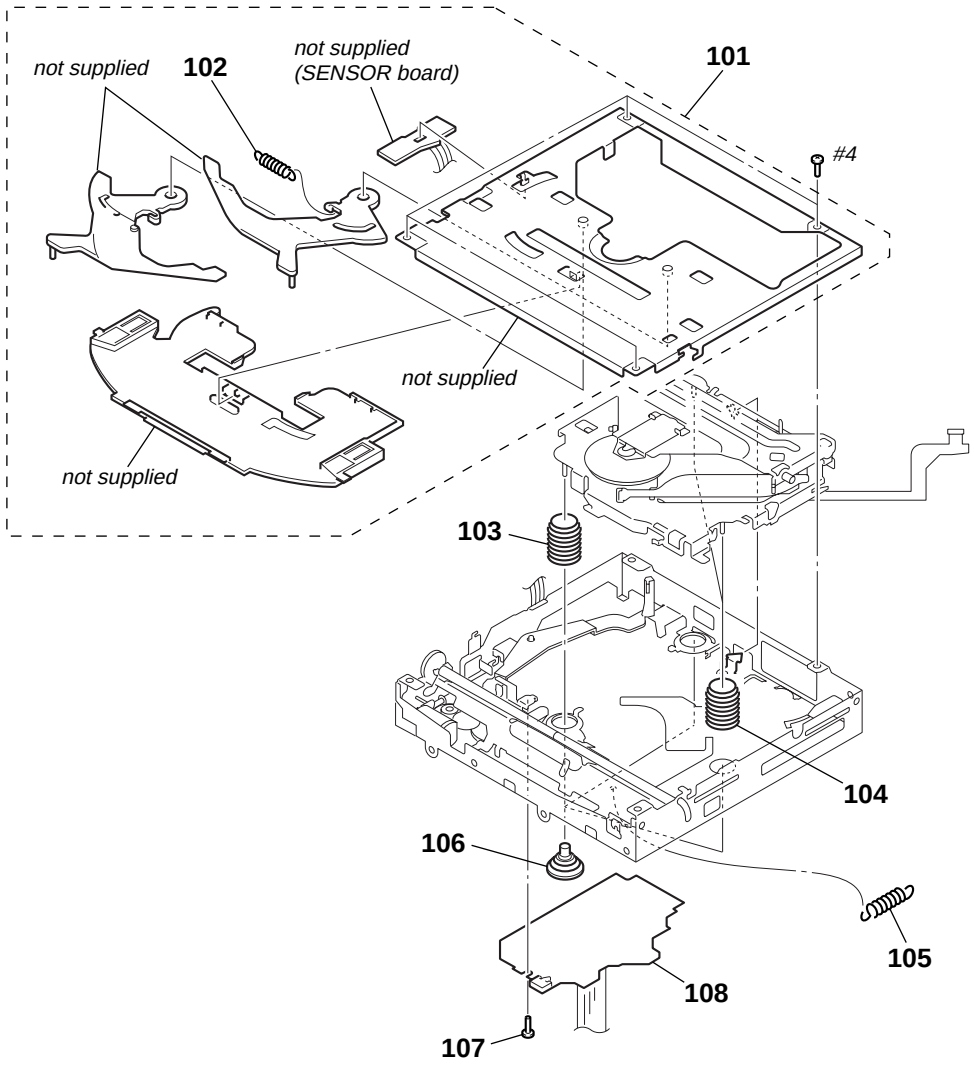
4-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3384-285-1	BUTTON KIT (SVX) ASSY	
52	X-3384-637-1	KNOB VOL (SVX) ASSY	
53	X-3384-283-1	PANEL ASSY (SVX), FRONT (F5000)	
53	X-3384-326-1	PANEL ASSY (SVX), FRONT (FW500)	
54	1-780-097-11	CONDUCTIVE BOARD, CONNECTION	
55	X-3384-501-1	PLATE SUB ASSY (N), LIGHT GUIDE	
56	X-3384-284-1	PANEL ASSY (SVX), FRONT BACK	

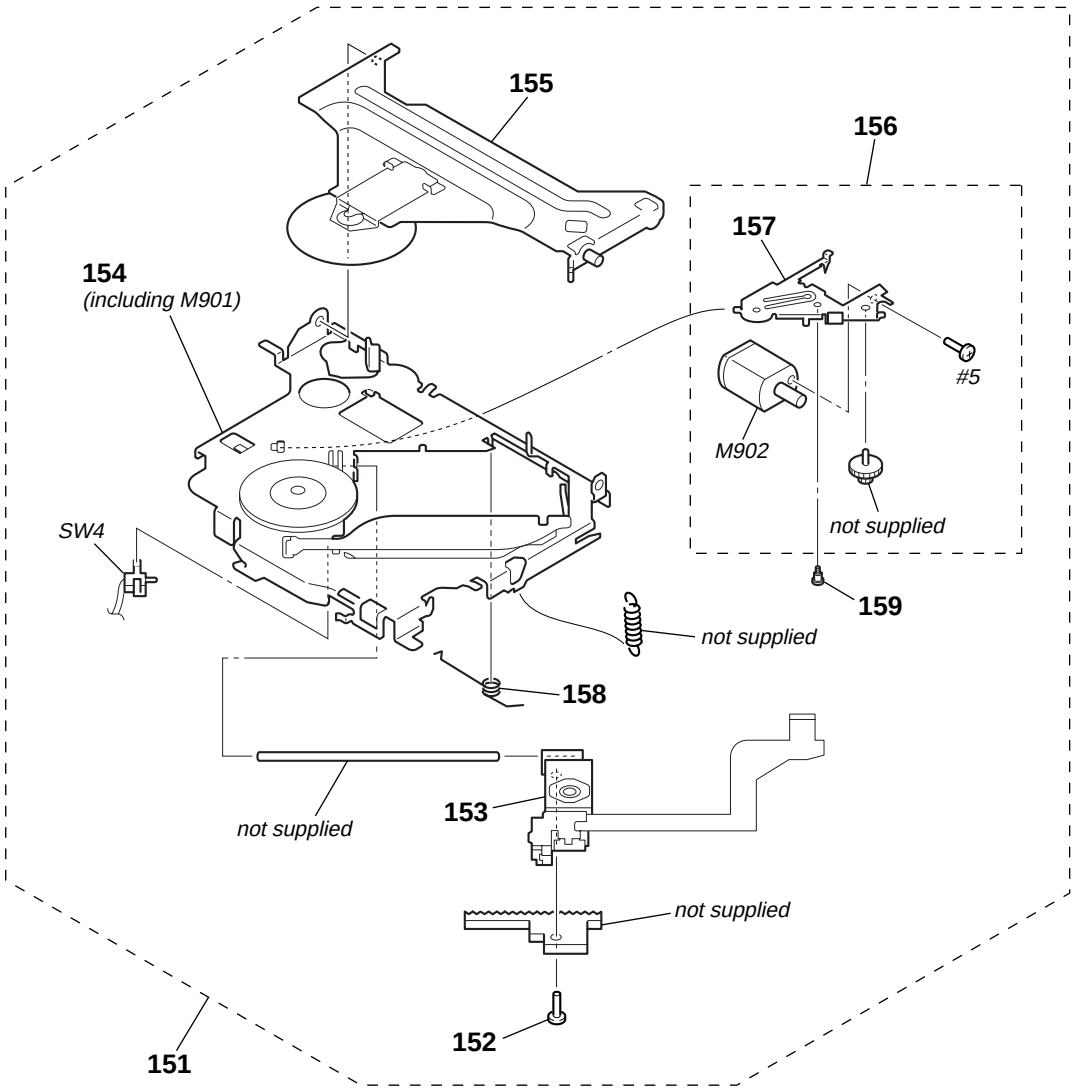
Ref. No.	Part No.	Description	Remark
57	X-3378-390-3	CASE (PANEL) ASSY (for FRONT PANEL)	
58	A-3220-955-A	FP-CDX-F5000//C (U) (F5000)	
58	A-3220-967-A	FP-CDX-FW500//C (U) (FW500)	
LCD901	1-805-456-11	DISPLAY PANEL, LIQUID CRYSTAL (F5000)	
LCD901	1-805-456-21	DISPLAY PANEL, LIQUID CRYSTAL (FW500)	
#3	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	

4-3. CD MECHANISM SECTION (1)
(MG-611XA-186//K)



Ref. No.	Part No.	Description	Remark
101	A-3372-455-A	CHASSIS (T) SUB ASSY	
102	3-253-729-01	SPRING (LTR), TENSION COIL	
103	3-253-746-13	SPRING (DAMPER), COMPRESSION	
104	3-253-746-03	SPRING (DAMPER), COMPRESSION	
105	3-253-695-01	SPRING (KF), TENSION COIL	
106	3-253-748-01	DAMPER (S)	
107	3-352-758-31	SCREW (M1.7), TOOTHED LOCK	
108	A-3283-350-A	SERVO BOARD, COMPLETE	
#4	7-627-552-87	SCREW, PRECISION +P 1.7X2.2	

4-4. CD MECHANISM SECTION (2)
(MG-611XA-186//K)

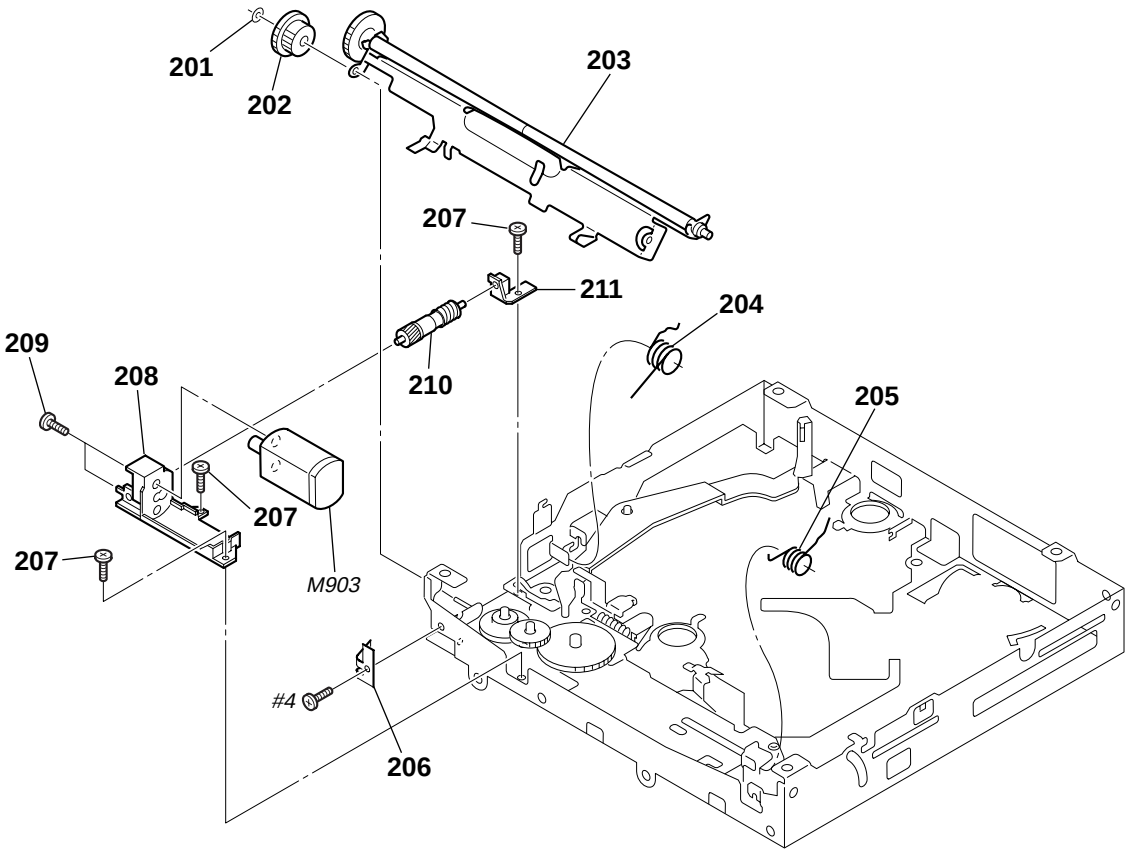


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	A-3337-637-A	CHASSIS (OP) COMPLETE ASSY	
152	4-912-432-01	SCREW (B1.4X5), TAPPING	
⚠153	8-820-207-02	OPTICAL PICK-UP (KSS1000E/K1RP)	
154	A-3337-640-A	CHASSIS (OP) SUB ASSY (including M901)	
155	A-3337-641-A	ARM SUB ASSY, CHUCKING	
156	A-3337-639-A	LEVER (SL) SUB ASSY	

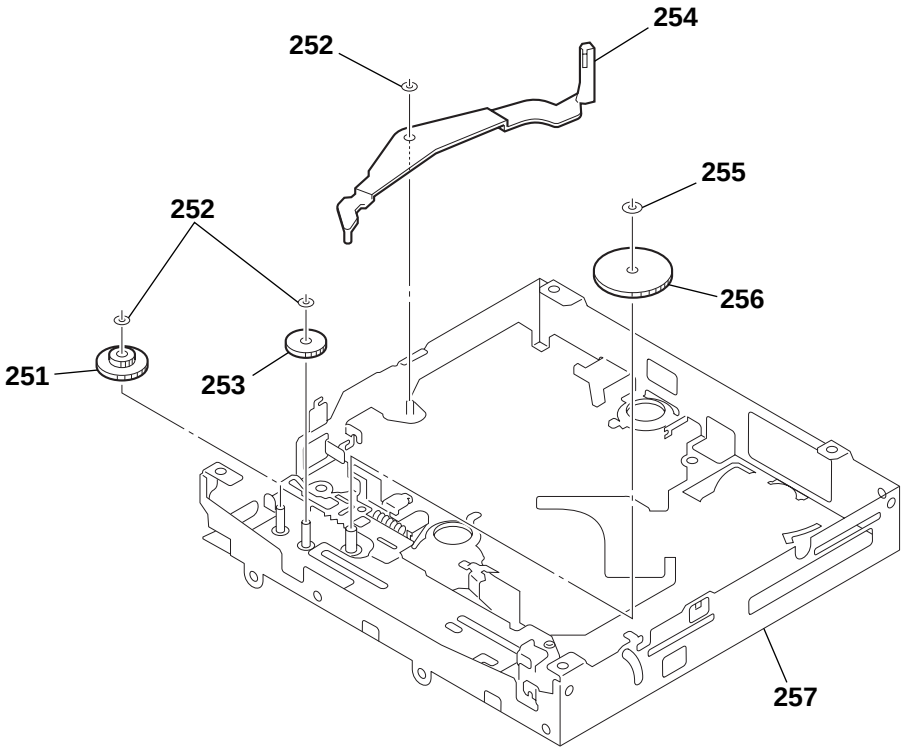
Ref. No.	Part No.	Description	Remark
157	X-3383-454-2	LEVER (SL) ASSY	
158	3-261-959-01	SPRING (SL), TORSION	
159	3-264-165-02	SCREW	
M902	A-3337-638-A	MOTOR ASSY, SL (SLED)	
SW4	1-571-099-11	SWITCH (1 KEY) (LIMIT)	
#5	7-627-850-77	SCREW, PRECISION +P 1.4X1.8	

4-5. CD MECHANISM SECTION (3)
(MG-611XA-186//K)



Ref. No.	Part No.	Description	Remark
201	3-262-755-01	WASHER (1.1-2.5)	
202	3-259-024-01	WHEEL (RA), WORM	
203	A-3337-633-A	ARM ASSY, ROLLER	
204	3-259-455-01	SPRING (RAL)	
205	3-253-713-01	SPRING (RAR)	
206	3-259-469-01	SPRING (LE), LEAF	
207	2-134-636-31	SCREW (M1.7X2.5)	
208	3-259-467-01	BRACKET (LEM)	
209	3-345-648-91	SCREW (M1.4), TOOTHED LOCK	
210	A-3372-456-A	WORM (LEB) ASSY	
211	3-259-468-01	BEARING (LEB)	
M903	A-3372-454-A	MOTOR ASSY, LE (LOADING)	
#4	7-627-552-87	SCREW, PRECISION +P 1.7X2.2	

4-6. CD MECHANISM SECTION (4)
(MG-611XA-186//K)



Ref. No.	Part No.	Description	Remark
251	3-259-429-01	WHEEL (LE), WORM	
252	3-344-223-01	WASHER	
253	3-259-470-01	GEAR (LE1)	
254	3-253-755-01	LEVER (D)	
255	3-899-829-01	WASHER (SLIT)	
256	3-259-032-01	GEAR (LE2)	
257	A-3372-453-A	CHASSIS (M) BLOCK ASSY	

SECTION 5
ELECTRICAL PARTS LIST

DISPLAY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable

When indicating parts by reference number, please include the board.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
		DISPLAY BOARD			
		**********			
	1-780-097-11	CONDUCTIVE BOARD, CONNECTION			
		< CAPACITOR >			
C951	1-135-834-11	CERAMIC CHIP	2.2uF		6.3V
C952	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C953	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C954	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C955	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C956	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C957	1-135-834-11	CERAMIC CHIP	2.2EuF		6.3V
C958	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN901	1-817-158-11	PLUG, CONNECTOR 14P			
		< DIODE >			
D902	8-719-978-33	DIODE DTZ-TT11-6.8B			
D903	8-719-978-33	DIODE DTZ-TT11-6.8B			
D904	8-719-978-33	DIODE DTZ-TT11-6.8B			
D905	8-719-988-61	DIODE 1SS355TE-17			
D906	8-719-978-33	DIODE DTZ-TT11-6.8B			
D951	8-719-069-54	DIODE UDZS-TE17-5.1B			
		< IC >			
IC901	8-759-826-21	IC LC75874W			
IC905	6-705-374-01	IC MM3033DULE			
IC951	6-600-321-01	IC KSM-401Y (IR)			
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-805-456-11	DISPLAY PANEL, LIQUID CRYSTAL (F5000)			
LCD901	1-805-456-21	DISPLAY PANEL, LIQUID CRYSTAL (FW500)			
		< DIODE >			
LED902	6-500-459-01	LED NSCW505T-ARS (LCD BACK LIGHT)			
LED905	6-500-459-01	LED NSCW505T-ARS (LCD BACK LIGHT)			
LED907	6-500-510-01	LED CL-195PG-CD-T (DSO) (FW500)			
LED907	8-719-053-09	LED SML-310VT-T86 (DSO) (F5000)			
LED908	6-500-510-01	LED CL-195PG-CD-T (SOURCE) (FW500)			
LED908	8-719-053-09	LED SML-310VT-T86 (SOURCE) (F5000)			
LED909	6-500-510-01	LED CL-195PG-CD-T (+) (FW500)			
LED909	8-719-053-09	LED SML-310VT-T86 (+) (F5000)			

Ref. No.	Part No.	Description	Remark
LED910	6-500-510-01	LED CL-195PG-CD-T (LIST CUT) (FW500)	
LED910	8-719-053-09	LED SML-310VT-T86 (LIST CUT) (F5000)	
LED911	6-500-510-01	LED CL-195PG-CD-T (4) (FW500)	
LED911	8-719-053-09	LED SML-310VT-T86 (4) (F5000)	
LED912	6-500-510-01	LED CL-195PG-CD-T (5) (FW500)	
LED912	8-719-053-09	LED SML-310VT-T86 (5) (F5000)	
LED913	6-500-510-01	LED CL-195PG-CD-T (6) (FW500)	
LED913	8-719-053-09	LED SML-310VT-T86 (6) (F5000)	
LED914	6-500-510-01	LED CL-195PG-CD-T (OFF) (FW500)	
LED914	8-719-053-09	LED SML-310VT-T86 (OFF) (F5000)	
LED915	6-500-510-01	LED CL-195PG-CD-T (BTM) (FW500)	
LED915	8-719-053-09	LED SML-310VT-T86 (BTM) (F5000)	
LED916	6-500-510-01	LED CL-195PG-CD-T (1) (FW500)	
LED916	8-719-053-09	LED SML-310VT-T86 (1) (F5000)	
LED917	6-500-510-01	LED CL-195PG-CD-T (2) (FW500)	
LED917	8-719-053-09	LED SML-310VT-T86 (2) (F5000)	
LED918	6-500-510-01	LED CL-195PG-CD-T (3) (FW500)	
LED918	8-719-053-09	LED SML-310VT-T86 (3) (F5000)	
LED919	6-500-510-01	LED CL-195PG-CD-T (▶▶I SEEK + ▶▶)	(FW500)
LED919	8-719-053-09	LED SML-310VT-T86 (▶▶I SEEK + ▶▶)	(F5000)
LED920	6-500-510-01	LED CL-195PG-CD-T (▶▶I SEEK + ▶▶)	(FW500)
LED920	8-719-053-09	LED SML-310VT-T86 (▶▶I SEEK + ▶▶)	(F5000)
LED921	6-500-510-01	LED CL-195PG-CD-T (DSPL) (FW500)	
LED921	8-719-053-09	LED SML-310VT-T86 (DSPL) (F5000)	
LED922	6-500-510-01	LED CL-195PG-CD-T (SENS) (FW500)	
LED922	8-719-053-09	LED SML-310VT-T86 (SENS) (F5000)	
LED923	6-500-510-01	LED CL-195PG-CD-T (MODE) (FW500)	
LED923	8-719-053-09	LED SML-310VT-T86 (MODE) (F5000)	
LED924	6-500-510-01	LED CL-195PG-CD-T (–) (FW500)	
LED924	8-719-053-09	LED SML-310VT-T86 (–) (F5000)	
LED925	6-500-510-01	LED CL-195PG-CD-T (I◀◀ SEEK – ◀◀)	(FW500)
LED925	8-719-053-09	LED SML-310VT-T86 (I◀◀ SEEK – ◀◀)	(F5000)
LED926	6-500-510-01	LED CL-195PG-CD-T (I◀◀ SEEK – ◀◀)	(FW500)
LED926	8-719-053-09	LED SML-310VT-T86 (I◀◀ SEEK – ◀◀)	(F5000)
LED927	6-500-510-01	LED CL-195PG-CD-T (EQ3) (FW500)	
LED927	8-719-053-09	LED SML-310VT-T86 (EQ3) (F5000)	

DISPLAY | MAIN

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q501	8-729-901-81	TRANSISTOR 2SC2412K-T-146-R			
		< RESISTOR >			
R901	1-216-819-11	METAL CHIP	680	5%	1/10W
R902	1-216-819-11	METAL CHIP	680	5%	1/10W
R903	1-216-819-11	METAL CHIP	680	5%	1/10W
R904	1-216-821-11	METAL CHIP	1K	5%	1/10W
R905	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R906	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R907	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R908	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R909	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R910	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R911	1-216-819-11	METAL CHIP	680	5%	1/10W
R912	1-216-819-11	METAL CHIP	680	5%	1/10W
R913	1-216-819-11	METAL CHIP	680	5%	1/10W
R914	1-216-821-11	METAL CHIP	1K	5%	1/10W
R915	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R916	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R917	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R918	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R919	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R922	1-216-809-11	METAL CHIP	100	5%	1/10W
R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R925	1-216-817-11	METAL CHIP	470	5%	1/10W
R926	1-216-817-11	METAL CHIP	470	5%	1/10W
R927	1-216-817-11	METAL CHIP	470	5%	1/10W
R928	1-216-817-11	METAL CHIP	470	5%	1/10W
R940	1-216-833-11	METAL CHIP	10K	5%	1/10W
R941	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R947	1-216-814-11	METAL CHIP	270	5%	1/10W
R951	1-216-815-11	METAL CHIP	330	5%	1/10W
R952	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R956	1-216-821-11	METAL CHIP	1K	5%	1/10W
R957	1-216-841-11	METAL CHIP	47K	5%	1/10W
R958	1-216-821-11	METAL CHIP	1K	5%	1/10W
R959	1-216-821-11	METAL CHIP	1K	5%	1/10W
R960	1-216-821-11	METAL CHIP	1K	5%	1/10W
R961	1-216-857-11	METAL CHIP	1M	5%	1/10W
R971	1-216-806-11	METAL CHIP	56	5%	1/10W (FW500)
R971	1-216-809-11	METAL CHIP	100	5%	1/10W (F5000)
R972	1-216-806-11	METAL CHIP	56	5%	1/10W (FW500)
R972	1-216-809-11	METAL CHIP	100	5%	1/10W (F5000)
R973	1-216-806-11	METAL CHIP	56	5%	1/10W (FW500)
R973	1-216-809-11	METAL CHIP	100	5%	1/10W (F5000)
R974	1-216-806-11	METAL CHIP	56	5%	1/10W (FW500)
R974	1-216-809-11	METAL CHIP	100	5%	1/10W (F5000)
R975	1-216-806-11	METAL CHIP	56	5%	1/10W (FW500)
R975	1-216-809-11	METAL CHIP	100	5%	1/10W (F5000)
R976	1-216-806-11	METAL CHIP	56	5%	1/10W (FW500)
R976	1-216-809-11	METAL CHIP	100	5%	1/10W (F5000)
R977	1-216-809-11	METAL CHIP	100	5%	1/10W (FW500)
R977	1-216-812-11	METAL CHIP	180	5%	1/10W (F5000)
R978	1-216-811-11	METAL CHIP	150	5%	1/10W
R979	1-216-809-11	METAL CHIP	100	5%	1/10W (FW500)
R979	1-216-812-11	METAL CHIP	180	5%	1/10W (F5000)
R980	1-216-811-11	METAL CHIP	150	5%	1/10W
R981	1-216-809-11	METAL CHIP	100	5%	1/10W (FW500)
R981	1-216-812-11	METAL CHIP	180	5%	1/10W (F5000)
R982	1-216-811-11	METAL CHIP	150	5%	1/10W
		< ROTARY ENCODER >			
RE901	1-478-474-11	ENCODER, ROTARY (VOLUME/ PUSH KNOB SELECT)			
		< SWITCH >			
S901	1-771-884-31	SWITCH, TACTILE (OFF)			
S902	1-771-884-31	SWITCH, TACTILE (DISC/PRESET +)			
S903	1-771-884-31	SWITCH, TACTILE (LIST CUT)			
S904	1-771-884-31	SWITCH, TACTILE (DSO)			
S905	1-771-884-31	SWITCH, TACTILE (EQ3)			
S906	1-771-884-31	SWITCH, TACTILE (I◀◀ SEEK – ◀◀)			
S907	1-771-884-31	SWITCH, TACTILE (DSPL)			
S908	1-771-884-31	SWITCH, TACTILE (DISC/PRESET –)			
S909	1-771-884-31	SWITCH, TACTILE (▶▶I SEEK + ▶▶)			
S910	1-771-884-31	SWITCH, TACTILE (6)			
S911	1-771-884-31	SWITCH, TACTILE (5)			
S912	1-771-884-31	SWITCH, TACTILE (4/SHUF)			
S913	1-771-884-31	SWITCH, TACTILE (3/REP)			
S914	1-771-884-31	SWITCH, TACTILE (2)			
S915	1-771-884-31	SWITCH, TACTILE (1)			
S916	1-771-884-31	SWITCH, TACTILE (BTM)			
S917	1-771-884-31	SWITCH, TACTILE (SENS)			
S918	1-771-884-31	SWITCH, TACTILE (MODE)			
S919	1-771-884-31	SWITCH, TACTILE (SOURCE)			
**********					
	A-3283-503-A	MAIN BOARD, COMPLETE			
		**********			
	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C101	1-124-233-11	ELECT	10uF	20%	16V

Ref. No.	Part No.	Description			Remark
C106	1-124-234-00	ELECT	22uF	20%	16V
C107	1-124-233-11	ELECT	10uF	20%	16V
C109	1-124-233-11	ELECT	10uF	20%	16V
C111	1-124-233-11	ELECT	10uF	20%	16V
C113	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C400	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C406	1-136-154-00	FILM	0.012uF	5%	50V
C407	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C408	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C409	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C410	1-104-942-11	ELECT	1uF	20%	50V
C411	1-104-942-11	ELECT	1uF	20%	50V
C412	1-104-942-11	ELECT	1uF	20%	50V
C413	1-104-942-11	ELECT	1uF	20%	50V
C414	1-128-428-11	ELECT	10uF	20%	35V
C415	1-136-154-00	FILM	0.012uF	5%	50V
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C417	1-124-589-11	ELECT	47uF	20%	16V
C418	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C420	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C421	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C422	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C423	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C424	1-128-428-11	ELECT	10uF	20%	35V
C425	1-128-428-11	ELECT	10uF	20%	35V
C426	1-128-428-11	ELECT	10uF	20%	35V
C428	1-128-428-11	ELECT	10uF	20%	35V
C430	1-126-947-11	ELECT	47uF	20%	16V
C435	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C436	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C437	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C438	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C439	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C440	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C441	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C443	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C444	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C446	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C447	1-124-257-00	ELECT	2.2uF	20%	50V
C450	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C451	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C452	1-128-428-11	ELECT	10uF	20%	35V
C453	1-128-428-11	ELECT	10uF	20%	35V
C609	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C612	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C614	1-115-156-11	CERAMIC CHIP	1uF		10V
C618	1-126-786-11	ELECT	47uF	20%	16V
C619	1-126-964-11	ELECT	10uF	20%	50V
C620	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C701	1-124-584-00	ELECT	100uF	20%	10V
C704	1-124-584-00	ELECT	100uF	20%	10V
C705	1-124-584-00	ELECT	100uF	20%	10V
C706	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C707	1-124-584-00	ELECT	100uF	20%	10V
C709	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C801	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C802	1-124-589-11	ELECT	47uF	20%	16V
C807	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C809	1-124-584-00	ELECT	100uF	20%	10V
C810	1-125-701-11	DOUBLE LAYERS	0.047F		5.5V
C812	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C813	1-124-584-00	ELECT	100uF	20%	10V
C814	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C815	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C816	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C817	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C818	1-164-160-11	CERAMIC CHIP	20PF	5%	50V
C820	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C821	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C822	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C825	1-124-584-00	ELECT	100uF	20%	10V
C908	1-126-960-11	ELECT	1uF	20%	50V
C915	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C919	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C921	1-126-940-11	ELECT	330uF	20%	16V
C922	1-131-868-81	ELECT	3300uF	20%	16V
C990	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C991	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C992	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
		< CONNECTOR >			
CN751	1-817-536-11	CONNECTOR, BOARD TO BOARD 28P			
CNJ900	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CNP802	1-569-907-11	SOCKET, CONNECTOR 12P			
CNP901	1-774-701-21	PIN, CONNECTOR 16P			
		< JACK >			
CNP900	1-566-822-11	JACK (REMOTE IN)			
		< DIODE >			
D400	8-719-988-61	DIODE 1SS355TE-17			
D600	8-719-069-55	DIODE UDZS-TE17-5.6B			
D702	1-216-864-11	METAL CHIP 0		5%	1/10W
D801	8-719-988-61	DIODE 1SS355TE-17			
D803	8-719-977-12	DIODE DTZ6.8B			
D808	8-719-977-12	DIODE DTZ6.8B			
D810	8-719-988-61	DIODE 1SS355TE-17			
D811	8-719-109-97	DIODE RD6.8ES-B2			
D812	8-719-109-97	DIODE RD6.8ES-B2			
D813	8-719-109-97	DIODE RD6.8ES-B2			
D814	8-719-109-97	DIODE RD6.8ES-B2			
D815	8-719-109-97	DIODE RD6.8ES-B2			
D816	8-719-109-97	DIODE RD6.8ES-B2			
D817	8-719-109-97	DIODE RD6.8ES-B2			
D821	8-719-109-97	DIODE RD6.8ES-B2			
D822	8-719-109-97	DIODE RD6.8ES-B2			
D858	8-719-071-34	DIODE RB521S-30-TE61			
D902	8-719-053-18	DIODE 1SR154-400TE-25			
D903	8-719-053-18	DIODE 1SR154-400TE-25			
D904	8-719-200-82	DIODE 11ES2			
D905	8-719-200-82	DIODE 11ES2			
D906	8-719-200-82	DIODE 11ES2			
D907	8-719-200-82	DIODE 11ES2			
D908	8-719-200-82	DIODE 11ES2			
D909	8-719-200-82	DIODE 11ES2			

MAIN

Ref. No.	Part No.	Description	Remark
D910	8-719-071-34	DIODE RB521S-30-TE61	
D911	8-719-017-95	DIODE MA8180-TX	
D912	8-719-083-66	DIODE UDZS-TE17-18B	
D913	8-719-017-95	DIODE MA8180-TX	
D914	8-719-977-12	DIODE DTZ6.8B	
D915	8-719-069-56	DIODE UDZS-TE17-6.2B	
D916	8-719-200-82	DIODE 11ES2	
D917	8-719-200-82	DIODE 11ES2	
D919	8-719-049-38	DIODE 1N5404TU	
D921	8-719-200-82	DIODE 11ES2	
D922	8-719-200-82	DIODE 11ES2	
		< IC >	
IC100	6-705-359-01	IC TDA8588AJ/N2	
IC401	6-705-372-01	IC BD3808FS-FE2	
IC801	6-803-823-01	IC MB90477PF-G-168-BNDE1	
IC802	8-759-659-13	IC PST3428UL	
IC803	6-705-373-01	IC MM3123DPLE	
IC900	6-703-884-01	IC BA8271F-E2	
		< JUMPER RESISTOR >	
JR5	1-216-864-11	METAL CHIP 0 5%	1/10W
JR6	1-216-864-11	METAL CHIP 0 5%	1/10W
JR10	1-216-864-11	METAL CHIP 0 5%	1/10W
JR11	1-216-864-11	METAL CHIP 0 5%	1/10W
JR103	1-216-864-11	METAL CHIP 0 5%	1/10W
		< COIL >	
L400	1-414-398-11	INDUCTOR 10uH	
L602	1-414-394-41	INDUCTOR 2.2uH	
L700	1-410-501-11	INDUCTOR 2.2uH	
L701	1-410-501-11	INDUCTOR 2.2uH	
L702	1-410-509-11	INDUCTOR 10uH	
L900	1-456-617-11	COIL, CHOKE 250uH	
		< JACK >	
PJ401	1-774-699-12	JACK, PIN 4P (BUS AUDIO IN, AUDIO OUT REAR)	
PJ601	1-793-598-11	JACK (ANTENNA)	
		< TRANSISTOR >	
Q400	8-729-038-71	TRANSISTOR KRC107S	
Q401	8-729-038-55	TRANSISTOR KRA103S	
Q402	6-550-752-01	TRANSISTOR DTC614TKT146	
Q403	6-550-752-01	TRANSISTOR DTC614TKT146	
Q404	6-550-752-01	TRANSISTOR DTC614TKT146	
Q405	6-550-752-01	TRANSISTOR DTC614TKT146	
Q406	6-550-752-01	TRANSISTOR DTC614TKT146	
Q407	6-550-752-01	TRANSISTOR DTC614TKT146	
Q601	8-729-920-85	TRANSISTOR 2SD1664-QR	
Q800	8-729-038-55	TRANSISTOR KRA103S	
Q801	8-729-038-71	TRANSISTOR KRC107S	
Q802	8-729-038-55	TRANSISTOR KRA103S	
Q900	8-729-034-51	TRANSISTOR KTC3875	
Q901	8-729-034-51	TRANSISTOR KTC3875	
Q902	8-729-038-67	TRANSISTOR KRC102S	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-249-437-11	CARBON	47K	5%	1/4W
R402	1-216-833-11	METAL CHIP	10K	5%	1/10W
R403	1-216-833-11	METAL CHIP	10K	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R405	1-216-809-11	METAL CHIP	100	5%	1/10W
R406	1-216-809-11	METAL CHIP	100	5%	1/10W
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-216-833-11	METAL CHIP	10K	5%	1/10W
R409	1-218-881-11	METAL CHIP	27K	0.5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W
R412	1-216-809-11	METAL CHIP	100	5%	1/10W
R413	1-216-833-11	METAL CHIP	10K	5%	1/10W
R414	1-216-809-11	METAL CHIP	100	5%	1/10W
R415	1-216-809-11	METAL CHIP	100	5%	1/10W
R416	1-216-809-11	METAL CHIP	100	5%	1/10W
R417	1-216-809-11	METAL CHIP	100	5%	1/10W
R418	1-216-841-11	METAL CHIP	47K	5%	1/10W
R419	1-216-841-11	METAL CHIP	47K	5%	1/10W
R420	1-216-841-11	METAL CHIP	47K	5%	1/10W
R421	1-216-841-11	METAL CHIP	47K	5%	1/10W
R424	1-216-805-11	METAL CHIP	47	5%	1/10W
R426	1-216-821-11	METAL CHIP	1K	5%	1/10W
R427	1-216-809-11	METAL CHIP	100	5%	1/10W
R429	1-247-807-31	CARBON	100	5%	1/4W
R430	1-216-821-11	METAL CHIP	1K	5%	1/10W
R431	1-247-807-31	CARBON	100	5%	1/4W
R432	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-809-11	METAL CHIP	100	5%	1/10W
R436	1-216-809-11	METAL CHIP	100	5%	1/10W
R437	1-216-821-11	METAL CHIP	1K	5%	1/10W
R440	1-216-809-11	METAL CHIP	100	5%	1/10W
R441	1-216-809-11	METAL CHIP	100	5%	1/10W
R442	1-216-841-11	METAL CHIP	47K	5%	1/10W
R443	1-216-841-11	METAL CHIP	47K	5%	1/10W
R447	1-216-809-11	METAL CHIP	100	5%	1/10W
R448	1-216-841-11	METAL CHIP	47K	5%	1/10W
R603	1-247-807-31	CARBON	100	5%	1/4W
R604	1-247-807-31	CARBON	100	5%	1/4W
R606	1-216-809-11	METAL CHIP	100	5%	1/10W
R607	1-216-809-11	METAL CHIP	100	5%	1/10W
R608	1-216-809-11	METAL CHIP	100	5%	1/10W
R615	1-216-821-11	METAL CHIP	1K	5%	1/10W
R703	1-216-864-11	METAL CHIP	0	5%	1/10W
R705	1-216-809-11	METAL CHIP	100	5%	1/10W
R707	1-216-809-11	METAL CHIP	100	5%	1/10W
R709	1-216-864-11	METAL CHIP	0	5%	1/10W
R722	1-216-809-11	METAL CHIP	100	5%	1/10W
R801	1-216-809-11	METAL CHIP	100	5%	1/10W
R802	1-216-864-11	METAL CHIP	0	5%	1/10W
R804	1-216-809-11	METAL CHIP	100	5%	1/10W
R805	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R806	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R808	1-216-864-11	METAL CHIP	0	5%	1/10W
R810	1-216-845-11	METAL CHIP	100K	5%	1/10W
R811	1-216-845-11	METAL CHIP	100K	5%	1/10W
R814	1-216-845-11	METAL CHIP	100K	5%	1/10W

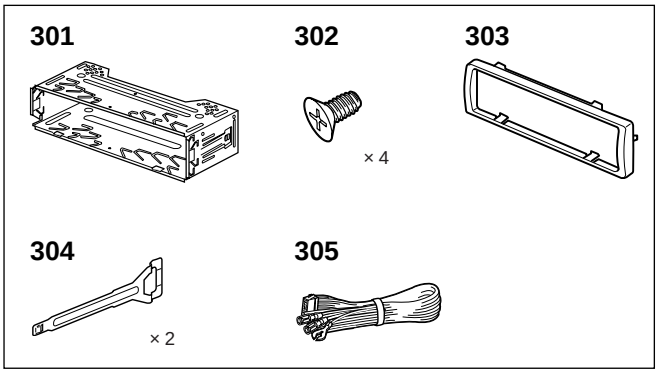
Ref. No.	Part No.	Description			Remark
R815	1-249-435-11	CARBON	33K	5%	1/4W
R818	1-216-809-11	METAL CHIP	100	5%	1/10W
R819	1-216-809-11	METAL CHIP	100	5%	1/10W
R821	1-216-817-11	METAL CHIP	470	5%	1/10W
R822	1-216-817-11	METAL CHIP	470	5%	1/10W
R823	1-216-817-11	METAL CHIP	470	5%	1/10W
R825	1-216-849-11	METAL CHIP	220K	5%	1/10W
R826	1-216-843-11	METAL CHIP	68K	5%	1/10W
R828	1-216-809-11	METAL CHIP	100	5%	1/10W
R830	1-216-809-11	METAL CHIP	100	5%	1/10W
R832	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R833	1-249-417-11	CARBON	1K	5%	1/4W
R834	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R835	1-216-845-11	METAL CHIP	100K	5%	1/10W
R838	1-216-845-11	METAL CHIP	100K	5%	1/10W
R839	1-216-809-11	METAL CHIP	100	5%	1/10W
R840	1-216-809-11	METAL CHIP	100	5%	1/10W
R841	1-216-809-11	METAL CHIP	100	5%	1/10W
R843	1-216-809-11	METAL CHIP	100	5%	1/10W
R844	1-216-845-11	METAL CHIP	100K	5%	1/10W
R846	1-216-845-11	METAL CHIP	100K	5%	1/10W
R847	1-216-845-11	METAL CHIP	100K	5%	1/10W
R848	1-216-845-11	METAL CHIP	100K	5%	1/10W
R849	1-216-841-11	METAL CHIP	47K	5%	1/10W
R850	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R851	1-216-809-11	METAL CHIP	100	5%	1/10W
R852	1-216-864-11	METAL CHIP	0	5%	1/10W
R853	1-216-864-11	METAL CHIP	0	5%	1/10W
R854	1-216-864-11	METAL CHIP	0	5%	1/10W
R855	1-216-821-11	METAL CHIP	1K	5%	1/10W
R856	1-216-845-11	METAL CHIP	100K	5%	1/10W
R857	1-216-809-11	METAL CHIP	100	5%	1/10W
R858	1-216-809-11	METAL CHIP	100	5%	1/10W
R859	1-216-809-11	METAL CHIP	100	5%	1/10W
R860	1-216-845-11	METAL CHIP	100K	5%	1/10W
R861	1-216-809-11	METAL CHIP	100	5%	1/10W
R862	1-216-809-11	METAL CHIP	100	5%	1/10W
R863	1-216-845-11	METAL CHIP	100K	5%	1/10W
R864	1-216-833-11	METAL CHIP	10K	5%	1/10W
R865	1-216-833-11	METAL CHIP	10K	5%	1/10W
R870	1-249-407-11	CARBON	150	5%	1/4W
R871	1-249-407-11	CARBON	150	5%	1/4W
R872	1-216-029-00	METAL CHIP	150	5%	1/10W
R873	1-216-845-11	METAL CHIP	100K	5%	1/10W
R900	1-216-849-11	METAL CHIP	220K	5%	1/10W
R901	1-216-845-11	METAL CHIP	100K	5%	1/10W
R902	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R903	1-216-841-11	METAL CHIP	47K	5%	1/10W
R904	1-216-841-11	METAL CHIP	47K	5%	1/10W
R905	1-216-833-11	METAL CHIP	10K	5%	1/10W
R907	1-216-833-11	METAL CHIP	10K	5%	1/10W
R908	1-216-809-11	METAL CHIP	100	5%	1/10W
R909	1-216-809-11	METAL CHIP	100	5%	1/10W
R910	1-216-809-11	METAL CHIP	100	5%	1/10W
R911	1-216-864-11	METAL CHIP	0	5%	1/10W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-216-821-11	METAL CHIP	1K	5%	1/10W
R914	1-469-144-21	FERRITE, EMI (SMD)			
R915	1-469-144-21	FERRITE, EMI (SMD)			
R917	1-249-431-11	CARBON	15K	5%	1/4W
R919	1-216-809-11	METAL CHIP	100	5%	1/10W
R920	1-216-821-11	METAL CHIP	1K	5%	1/10W
R921	1-216-809-11	METAL CHIP	100	5%	1/10W
R924	1-216-864-11	METAL CHIP	0	5%	1/10W
R925	1-216-845-11	METAL CHIP	100K	5%	1/10W
R926	1-216-849-11	METAL CHIP	220K	5%	1/10W
R927	1-216-833-11	METAL CHIP	10K	5%	1/10W
R929	1-216-821-11	METAL CHIP	1K	5%	1/10W
R930	1-216-821-11	METAL CHIP	1K	5%	1/10W
R931	1-216-073-00	RES-CHIP	10K	5%	1/10W
R932	1-216-073-00	RES-CHIP	10K	5%	1/10W
R936	1-216-864-11	METAL CHIP	0	5%	1/10W
		< SWITCH >			
S801	1-786-458-11	SWITCH, PUSH (1 KEY) (NOSE DET)			
S802	1-762-638-21	SWITCH, TACTILE (RESET)			
		< THERMISTOR (POSITIVE) >			
TH900	1-801-792-21	THERMISTOR, POSITIVE			
		< TUNER >			
TUX601	A-3220-961-A	TUNER UNIT (TUX-032)			
		< VIBRATOR >			
X800	1-767-993-21	VIBRATOR, CRYSTAL (3.68MHz)			
X801	1-813-202-11	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
		RELAY BOARD			
		**********			
	1-792-173-11	CABLE, FLAT (FFC) 12P (CNP903)			
		< CAPACITOR >			
C973	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C974	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CNP902	1-817-159-11	SOCKET, CONNECTOR 14P			
		< DIODE >			
LED930	6-500-511-01	LED CL-270PG-C-TS (DISC IND) (FW500)			
LED930	8-719-082-38	LED CL-270SR-C-TS (DISC IND) (F5000)			
LED931	6-500-510-01	LED CL-195PG-CD-T (⏏) (FW500)			
LED931	8-719-053-09	LED SML-310VT-T86 (⏏) (F5000)			
		< RESISTOR >			
R931	1-216-864-11	METAL CHIP	0	5%	1/10W
		< SWITCH >			
S931	1-771-884-31	SWITCH, TACTILE (⏏)			
**********					

SENSOR | SERVO

Ref. No.	Part No.	Description			Remark
		SENSOR BOARD			
		**********			
		< SWITCH >			
SW2	1-529-566-61	SWITCH, PUSH (1 KEY) (SELF)			
SW3	1-529-566-61	SWITCH, PUSH (1 KEY) (DISC IN)			
**********					
	A-3283-350-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C2	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C3	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C6	1-100-381-11	ELECT CHIP	10uF	20%	16V
C7	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C8	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C11	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C13	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C17	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C18	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C19	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C20	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C21	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C23	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C25	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C26	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C27	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C28	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C29	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C30	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C31	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C32	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C34	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C35	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C36	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C37	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C38	1-104-609-11	ELECT CHIP	100uF	20%	4V
C39	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C70	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C71	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C72	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C73	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C74	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C75	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C76	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C77	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C78	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C79	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
		< CONNECTOR >			
CN1	1-817-275-21	CONNECTOR, BOARD TO BOARD 28P			
CN2	1-794-153-21	CONNECTOR, FPC (ZIF) 16P			
		< FERRITE BEAD >			
FB1	1-414-760-21	FERRITE, EMI (SMD)			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC1	6-703-699-01	IC uPD63712GC-8EU-A			
IC2	6-705-002-01	IC BA5966FP-FE2			
		< FERRITE BEAD >			
JR40	1-414-760-21	FERRITE, EMI (SMD)			
JR41	1-414-760-21	FERRITE, EMI (SMD)			
JR90	1-414-760-21	FERRITE, EMI (SMD)			
JR91	1-414-760-21	FERRITE, EMI (SMD)			
		< TRANSISTOR >			
Q1	8-729-904-87	TRANSISTOR 2SB1197K-R			
		< RESISTOR >			
R1	1-216-841-11	METAL CHIP	47K	5%	1/10W
R6	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7	1-216-840-11	METAL CHIP	39K	5%	1/10W
R9	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R11	1-216-833-11	METAL CHIP	10K	5%	1/10W
R12	1-216-809-11	METAL CHIP	100	5%	1/10W
R13	1-216-833-11	METAL CHIP	10K	5%	1/10W
R14	1-216-797-11	METAL CHIP	10	5%	1/10W
R15	1-216-797-11	METAL CHIP	10	5%	1/10W
R41	1-216-821-11	METAL CHIP	1K	5%	1/10W
R42	1-216-821-11	METAL CHIP	1K	5%	1/10W
R44	1-414-760-21	FERRITE, EMI (SMD)			
R45	1-414-760-21	FERRITE, EMI (SMD)			
R70	1-216-842-11	METAL CHIP	56K	5%	1/10W
R71	1-216-833-11	METAL CHIP	10K	5%	1/10W
R72	1-216-842-11	METAL CHIP	56K	5%	1/10W
R73	1-216-833-11	METAL CHIP	10K	5%	1/10W
R74	1-216-837-11	METAL CHIP	22K	5%	1/10W
R75	1-216-833-11	METAL CHIP	10K	5%	1/10W
R76	1-216-837-11	METAL CHIP	22K	5%	1/10W
R77	1-216-833-11	METAL CHIP	10K	5%	1/10W
R78	1-216-833-11	METAL CHIP	10K	5%	1/10W
R79	1-216-833-11	METAL CHIP	10K	5%	1/10W
R80	1-216-833-11	METAL CHIP	10K	5%	1/10W
R81	1-216-833-11	METAL CHIP	10K	5%	1/10W
R82	1-216-837-11	METAL CHIP	22K	5%	1/10W
R83	1-216-833-11	METAL CHIP	10K	5%	1/10W
R84	1-216-837-11	METAL CHIP	22K	5%	1/10W
R85	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
SW1	1-529-565-61	SWITCH, PUSH (1 KEY) (DOWN)			
		< VIBRATOR >			
X1	1-795-562-21	VIBRATOR, CERAMIC (16.9344MHz)			
**********					

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
10	1-776-206-21	CORD (WITH CONNECTOR) (POWER)	
⚠153	8-820-207-02	OPTICAL PICK-UP (KSS1000E/K1RP)	
154	A-3337-640-A	CHASSIS (OP) SUB ASSY (including M901)	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
M902	A-3337-638-A	MOTOR ASSY, SL (SLED)	
M903	A-3372-454-A	MOTOR ASSY, LE (LOADING)	
SW4	1-571-099-11	SWITCH (1 KEY) (LIMIT)	
**********			
		ACCESSORIES	
		**********	
	1-476-526-34	REMOTE COMMANDER (RM-X115)	
	3-230-047-01	LID, BATTERY CASE (for RM-X115)	
	3-261-847-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH)	(F5000)
	3-261-847-21	MANUAL, INSTRUCTION (ENGLISH,SPANISH)	(FW500)
	3-261-849-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH)	(F5000)
	3-261-849-31	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH)	(FW500)
	X-3378-390-3	CASE (PANEL) ASSY (for FRONT PANEL)	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
301	X-3382-647-1	FRAME ASSY, FITTING	
302	3-934-325-01	SCREW (+K 5X8 TP)	
303	3-260-658-01	COLLAR	
304	3-246-471-01	KEY (FRAME)	
305	1-776-207-82	CORD (WITH CONNECTOR) (POWER)	



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2003. 12	New
1.1	2004. 05	Part number correction of TUX601. (SPM-04009)